Access to Microfinance & Improved Implementation of Policy Reform
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JORDAN CAPITAL MARKETS

Amman Stock Exchange
Business Plan

Draft Report

Deliverable for Jordan Capital Markets Component
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This Report was prepared by Mr. Majd Shafiq as a subcontractor to Chemonics International, Inc., Prime Contractor to U.S. Agency for International Development for the AMIR Program in Jordan

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I. LIST OF ACRONYMS

ADR	American Depository Receipt
AMEX	American Stock Exchange
CEO	Chief Executive Officer
GDR	Global Depository Receipt
GDS	Global Depository Share
IFC	International Finance Corporation
IOSCO	International Organization of Securities Commissioners
IPO	Initial Public Offering
IT	Information Technology
ITS	Intermarket Trading System
MENA	Middle East and North Africa
MSCI	Morgan Stanley Capital International
NASD	National Association of Securities Dealers
NYSE	New York Stock Exchange
SDC	Securities Depository Center
SEC	Securities and Exchange Commission
SIA	Securities Industry Association
QIZ	Qualified Industrial Zone

II. PREAMBLE

There are several ways to preparing a business plan. In this particular case, the enterprise, the Amman Stock Exchange ("ASE") is an ongoing project that came into existence out of the breakup of the former Amman Financial Market. The aim of this consultancy is to produce a business plan that would enable the ASE to function as a self-sustaining private sector enterprise while balancing its public sector role.

At the outset, it should be noted that each enterprise carries different elements of risk; production, market, financial and legal. In a typical business setting, the investor would need to assess potential risks before committing funds to the enterprise. The investor would also need to understand how the various risks could be alleviated and/or shared with other stakeholders in a manner that would ensure the success of the enterprise.

Hence, a typical business plan should include a detailed statement of where the enterprise is today and its future strategy. It should explain why the enterprise will be successful and what is unique about it. And it should examine, in detail, the basic assumptions of the business of the enterprise.

This Business Plan complements other USAID/AMIR reports on the ASE and SDC and should be read in conjunction therewith.

III. EXECUTIVE SUMMARY

1. Mission Statement

For developing countries and pre-emerging markets such as Jordan, exchanges and securities markets tend to have the following benefits:

i. an active securities market **increases the efficiency of investment** because of the control imposed on the behavior of companies through continuous adjustment of their share prices in the market;

ii. an active securities market **lowers the cost of equity capital and, as a result, increases investment and economic growth** by spreading the risks of long-term projects among many investors; and,

iii. an active securities market can **attract foreign portfolio capital and foreign direct investment, increase domestic resource mobilization**, and, as a result, expand the resources available for investment.

The ASE officially started operations on March 11, 1999. Its functions, as specified by the Securities Law, are:

a. to provide the proper environment to secure the interaction of supply and demand forces for listed securities by establishing proper, clear and fair trading rules necessary to achieve price discovery and trade;

b. to provide the trading floors, connections and telecommunications lines necessary for trading;

c. to monitor trading and coordinate with the JSC on surveillance matters in a way that would guarantee the rights of investors and that does not permit fraud in trading;

d. to prepare and publish reports and information related to ASE activities;

e. to voice opinions on legislation and proposed amendments related to ASE functions and to suggest amendments to such legislation and other regulations pertaining to the protection and development of the financial market;

f. to establish communication links and cooperative relationships with exchanges, associations and international organizations in the field of securities; and,

g. to establish parameters for professional conduct and principles of honest and fair work ethics for its members.

2. Definition of Business

One way of defining exchanges is to regard them as providing a link between "deficit units;" people, enterprises and governments that are in need of more funds than they already have, and "surplus units;" those that have more funds than they need at a particular point in time. In doing so, the ASE contributes to the economic development of Jordan by **mobilizing local savings and attracting foreign investments.**

The ASE's functions do not diverge from this definition but amplify it. The ASE seeks to **provide a market for the trading of securities in Jordan**. It does so by helping establish a **fair, efficient, liquid, and transparent capital market** in Jordan.

The ASE provides the necessary trading facilities, monitors trading and strives to safeguard the rights of investors. It also engages in information dissemination and is of added value on the formulation capital market legislation.

The ASE offers **three types of products:**

a. listing services;

b. trading services; and,

c. price-information services.

To produce these services, the ASE utilizes two basic markets: the Primary Market, where securities are issued; and the Secondary Market, where securities are traded.

The Secondary Market is divided into three sub-markets: the Regular Market, where trading of listed companies that meet certain requirements takes place; the Parallel Market, with more flexible listing requirements; and, the Bonds Market, where trading in government and corporate bonds takes place.

The ASE is in the process of restructuring its markets with **new listing requirements** and procedures being drafted. Basically, the new structure will **split the Secondary Market into three: the First, Second, and Third Market. Each market has different listing requirements with the Third akin to an OTC board.**

According to the new listing regulations, the ASE Board of Directors has the authority to list public shareholding companies that come into existence via privatization in the First or Second Markets. The same holds true for certain private companies that go public. The new regulations allow for a transition period for companies currently listed in the Regular Market to adjust to the requirements of the First Market.

The new regulations also ease the listing of investment units of local and foreign mutual funds.

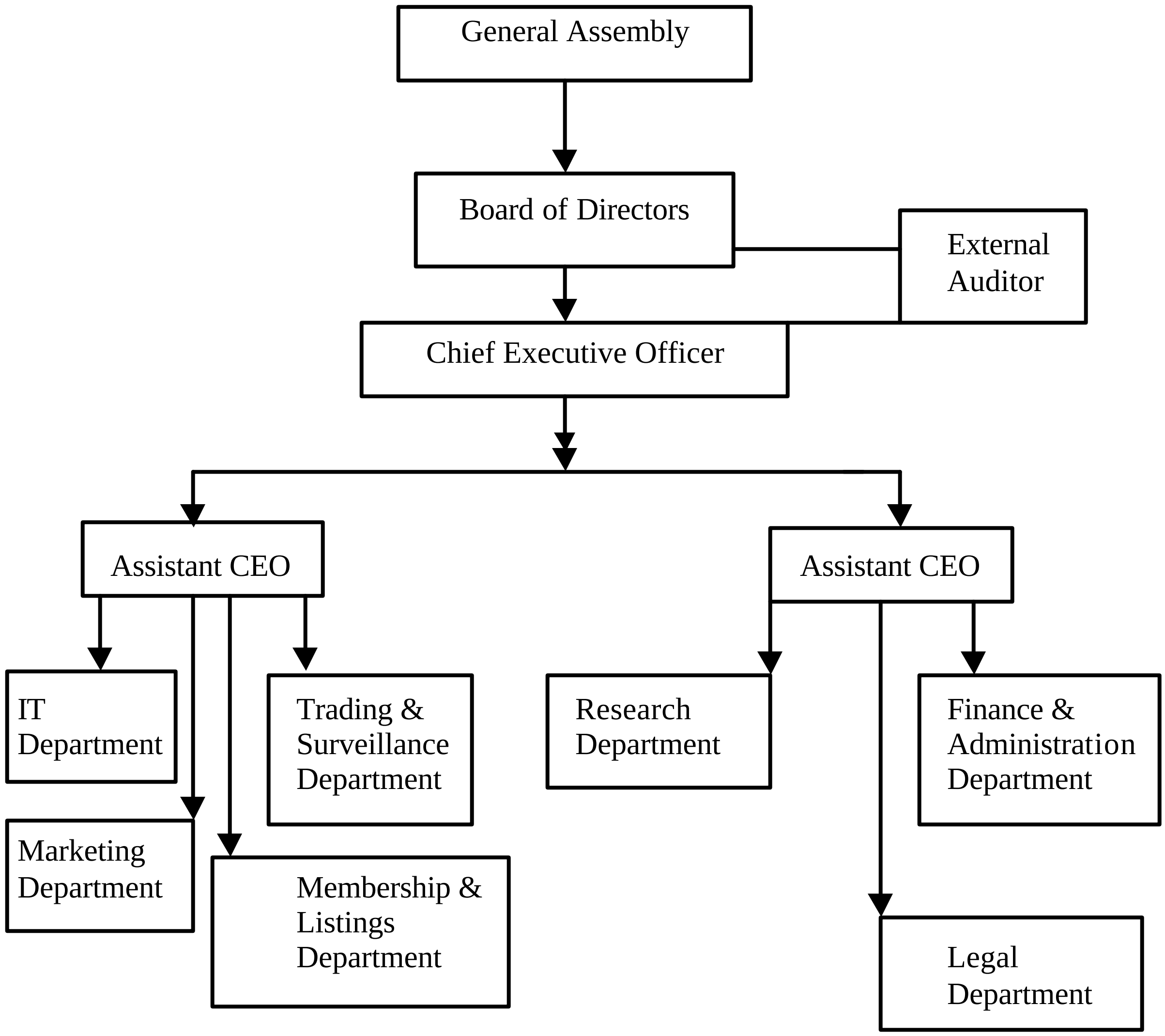
The ASE has two main client categories. **Direct clients** include issuers, brokers, and information vendors. And **indirect client,** which include institutional investors, single customers (both physical and juridical) and, other intermediaries not allowed direct access.

3. Management and Organization

The quality of management is crucial to the success of the ASE. And even though technology is critical to the future of any exchange, **people remain its most important resource**. The **ASE's ability to hire, train and retain** qualified staff and management is essential to its current and future success and viability.

USAID/AMIR consultants have put together a **training action plan** for training of ASE staff which includes t*raining on underwriting, investments and investors, corporate governance*, *capital raising*, *m*arket research, information dissemination, and business plans, exchange regulation and capital markets, and analytical techniques.

ASE by-laws require that the Board of Directors lay out the organizational structure as well as staff, financial and administrative regulations. The following is a suggested **organizational structure** for the ASE based on what exists already:


General Assembly
Board of Directors
External Auditor
Chief Executive Officer
Assistant CEO
Assistant CEO
IT Department
Trading & Surveillance Department
Research Department
Finance & Administration Department
Marketing Department
Membership & Listings Department
Legal Department

The following general **recommendations** pertaining to management and organization issues should be looked into soonest:

i. All heads of departments need to be **officially appointed** as such.

ii. **Job descriptions** need to be drawn up for staff members and management.

iii. An **IT and equipment needs** assessment report should be formulated.

iv. A **staffing needs** assessment report should be formulated. Some ASE departments are understaffed.

v. Each department should have clear administrative **procedures**.

vi. **Information flows** between departments and lines of cooperation need to be officially formulated.

vii. **Performance monitoring** procedures need to be drawn up along with performance goals for each department.

Additionally, the following specific recommendations warrant special attention:

a. The General Assembly does not include members other than brokerage houses. It is recommended that the **General Assembly include other members such as listed firms**.

b. It is recommended that **Board of Directors representation also include representatives of listed firms**.

c. It is recommended that department reporting and supervision be divided between the **two Assistant CEOs**. One Assistant CEO would be responsible for the Trading, IT, Members & Listings, and the new Marketing departments. The other would be responsible for the Finance & Administration, Legal, and Research departments.

d. The name of the Computer Department be changed to the **IT Department**.

e. The IT Department is to undertake **IT Research & Development** activities, with the aim of developing

proprietary software in cooperation with Jordan's budding IT industry.

f. Continuous training programs should be established whereby **IT skills** are upgraded for all ASE staff and management on a regular basis.

g. The development of a **centralized database** for the ASE should be looked into and the role of the IT Department in such an initiative should be defined. Such a database would include output from trading activities, archives, information on listed companies, rules and regulations, decisions of the Board of Directors, etc. The database should be augmented by an **MIS system for applications to be used by various departments**.

h. All public relations and marketing functions be entrusted to a new **Marketing Department** (Please see below).

i. A **pricing system for published material** (on paper and CD) should be formulated in conjunction to a **pricing strategy for ASE web site use**.

j. The Research Department needs IT support in terms of **publishing programs** and improving the quality of published documents.

k. More **training on surveillance** is needed for the Trading Department.

l. The Members & Listings Department needs more authority to follow up on **disclosure matters**. As the rules stand now, the ASE cannot request any documents from listed companies and is not even officially notified of meeting of the general assemblies.

m. The Members & Listings Department should have a database to automate information on listed companies.

n. The Members & Listings Department should closely coordinate with the new Marketing Department on formulating a **membership and listings strategy**.

o. The **Internal Audit Department be merged into the Finance & Administration Department**.

p. A new structure within the Finance & Administration Department be created whereby, in addition to the Head of Department, two Assistant Heads be appointed; Auditing and Administration.

q. The Finance & Administration Department needs to develop an MIS system that would assist it in automating daily calculations of fees and commissions, accounting and bookkeeping.

r. Public relations functions not be part of the Finance & Administration Department but be assigned to the new Marketing Department.

s. A new **Marketing Department** to be created. Its responsibilities to include marketing ASE products and services in terms of listings, membership, and information dissemination. The Department is to handle all public relations functions. (Please see "Recommendations" below).

t. The ASE should seriously consider putting in place a **profit sharing plan for staff and management**.

4. Summary Financials

The products and services offered by the ASE are commercially viable. The ASE has potential for sustained growth. Management is talented and has the ability to exploit this potential and control the ASE throughout the growth phases. The projected Income Statement that follows is **based on a set of cost and revenue assumptions** explicated in "Financial Projections." Should those assumptions change the financial projections should be adjusted accordingly.

ASE Projected Income Statement

	2000	2001	2002	2003	2004
Revenues					
Listing	318,045	359,944	436,894	558,071	723,076
Trading	551,814	629,754	748,529	890,807	1,061,281
Information Dissemination	18,200	71,085	114,329	175,612	228,151
Subscription Fees	217,000	420,475	827,011	1,234,150	1,640,719
Total	**1,105,059**	**1,481,258**	**2,126,763**	**2,858,640**	**3,653,227**
Expenses					
Rate of Increase in Salaries		20%	20%	20%	20%
Employee Compensation	333,115	399,738	479,686	575,623	690,747
Board of Directors Compensation	53,000	58,300	64,130	70,543	77,597
Training	30,000	36,000	43,200	51,840	62,208
Marketing	20,000	40,000	80,000	100,000	100,000
Maintenance of Trading System	20,000	50,000	55,000	60,500	66,550
Maintenance of Other	20,000	22,000	24,200	26,620	29,282
Organizational Subscriptions	9,428	11,314	13,576	16,292	19,550
Office Supplies & Printed Matter	20,000	22,000	24,200	26,620	29,282
Insurance	4,000	4,400	4,840	5,324	5,856
Telecommunication	36,000	43,200	51,840	62,208	74,650
Outside Consultants	0	0	20,000	30,000	40,000
Other /Contingency	19,000	20,900	22,990	25,289	27,818
Depreciation	40,111	40,111	40,111	40,111	40,111
Cost of Goods Sold	**604,654**	**747,963**	**923,773**	**1,090,970**	**1,263,652**
Gross Profit	**500,405**	**733,295**	**1,202,990**	**1,767,670**	**2,389,576**
Rent	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**
Net Income	**504,654**	**647,963**	**823,773**	**990,970**	**1,163,652**
Taxes					
Net Income After Taxes	**504,654**	**647,963**	**823,773**	**990,970**	**1,163,652**
Retained Earnings	**504,654**	**1,009,309**	**1,657,271**	**2,481,045**	**3,472,014**
Total Distributable Income	**1,009,309**	**1,657,271**	**2,481,045**	**3,472,014**	**4,635,666**

5. Recommendations

a. Regional Leadership:

The exchange or the trading services industry is becoming increasingly competitive. Three main factors are propelling this trend forward:

a. the decrease in system development costs caused by technological advances in computer processing and the "commoditization" of the trading technology;

b. the decline in the competitive advantages offered by geography caused, in no small part, by the decline in the cost of constructing cross-border trading networks; and,

c. the ability to custom-make automated trading systems, at competitive costs, that would allow trading in a variety of securities and financial products.

It is highly recommended that the **ASE formulate a competitive strategy** that would address current and future industry dynamics on a regional and international level. As a starting point, the ASE should ask itself three questions:

i. Is it providing real value to its customers?

ii. Is the current modus operandi the most effective way of serving its customers?

iii. It the current modus operandi the best practice that could be realized at the present time, or is it a function of vested interest?

By answering these questions, the ASE can start to formulate a **competitive strategy** that would enable it to hedge against various outcomes as the regional and international market for the provision of trading services evolves.

The ASE should **seek regional leadership** by offering **world-class exchange services**. It should be able to attract clients because of its overall quality, cost factors, and market microstructure. **Liquidity, price discovery, and quick execution** should be at the forefront of such efforts. (Please see **"Notes on Liquidity"**).

The ASE **competitive strategy** should pay attention to the following points:

1. The ASE should conduct an **industry and competitive analysis** on the regional trading services industry. Competition between exchanges is difficult to analyze for many reasons. One such reason is that it is difficult to define the relevant markets within which exchanges compete. However, whenever exchanges compete in standardized areas, only one will dominate. The ASE should also be **prepared to compete with a Middle Eastern virtual exchange** should a group of investors decide to launch once in the near future.

   Competition between Middle Eastern exchanges for listing and trading services is expected to go hand-in-hand with attempts at various levels of cooperation. Will Middle Eastern exchanges merge? Is there enough business for all of them to flourish? Will price wars start between them to attract more listings and trading volumes? Will new types of strategic alliances find their way into the region? Can one exchange decide unilaterally to trade shares listed on other exchanges? Attempting to obtain answers to such question would assist the ASE in being part of **setting the regional agenda for its industry.**

2. The ASE is a monopoly. However, once the **market into which the ASE operates is redefined to that of a regional one**, the picture changes. Measure that could be utilized to determine the ASE's share of the regional market for trading and listing services include the ratio of ASE capitalization to regional capitalization and the ratio of ASE trading volume to regional trading volume. It is recommended that such measures be utilized in conducting and **industry and competitive analysis** for the ASE.

3. The ASE should concentrate on **extending its scope beyond the borders of Jordan**. Geography is less important because of the ongoing integration of financial markets, instruments and intermediaries and improvements in technology.

4. New draft regulations facilitate **listings outside Jordan** of securities issued by Jordanian companies. It is recommended that the ASE undertake an exercise to analyze the dynamics of this process and study its impact on ASE trading volumes. Additionally, the ASE has to **compete for future IPOs,** which may opt for more liquid and dynamic markets such as Nasdaq or London. It is recommended that the ASE formulate a **competitive strategy** that would, among other things, help it **compete on the merits of the products if offers rather than continue to depend on the captivity of its clients.**

b. Pricing Strategy:

An exchange could be viewed as a company competing with others to **produce the best price-quality-quantity combination.**

It is recommended that the ASE carry out **pricing studies** to determine a new pricing structure that would enhance its competitive position. The study would take into consideration **marginal costs** and **regional, international, and virtual pricing structures and techniques for the relevant securities in terms of trading, listing, and information dissemination services** offered. It would recommend a pricing strategy that would **help maintain and increase listings and trading volumes and maintain the ASE's margins.**

It is recommended that such an exercise be carried out soonest. It should include an assessment of the key price drivers at the ASE, cost of inputs, client sensitivity, and an evaluation of substitution products, taking into consideration recent regional and international exchange industry developments.

c. Information Technolgoy (IT):

Advances in automated trading have impacted the way exchanges deliver their trading services to investors. The increase of automated trading systems that cannot communicate with one another directly has led to the emergence of **adapter systems that aim to allow investors access across several exchanges while reducing access costs**. This is typically achieved via the provision of standardized interface across the different exchanges.

Akin to electronic brokerage firms, these adapter systems become members in several automated exchanges through electronic interface. Adapters are then marketed to institutional investors who want to **access several exchanges from one entry point**. Examples of such operations include Instinet (owned by Reuters), Lattice Trading (owned by State Street Brokerage) and PrimeTrade (owned by CSFB).

The ASE may very well consider offering such a service that would tie in several Middle Eastern exchanges into one system accessed through the **ASE, becoming a regional adapter.**

The link between the ASE and Jordan’s budding IT industry should be emphasized and ways of cooperation outlined and pursued. For example, the ASE could look at developing proprietary software that would capitalize on the existing gap between investors' desire to acquire specific combinations or baskets of assets, otherwise known as **Combination Trading**, and the ability of trading institutions to provide trading services for individual assets. Although the question of whether investors will increasingly demand to trade baskets of assets is still an open question, it may be worthwhile for the ASE to explore, on a proprietary basis or in joint venture with others, such as local IT firms, the concept of trading combinations of securities over electronic networks.

The ASE, as a new player in electronic trading, should take advantage of "**open architecture**" trading services systems, which substantially facilitate the integration of new trading systems with existing information and support systems.

Securities markets are basically markets in information. Market microstructure can improve an exchange by increasing the amount of information it receives, processes, and disseminates to actual and potential customers. As such, the **ASE is one of Jordan's main IT plays**. It is both a content and a linkup provider. It is recommended that the ASE further explore this business model to ascertain ways in which it can offer **business-to-business and business-to-consumer e-commerce products related to exchange trading.**

d. Marketing Department:

Today's international portfolio investors look for large markets, large currencies, and large companies. **How can the ASE market itself** to such players? How can it increase listings and trading volumes?

It is recommended that the ASE formulate a **marketing plan**. The marketing plan should include the **creation of a Marketing Department** along with dedicated staff. The head of the Department should be well versed in the current functions and future plans of the ASE.

The central goal of the **Marketing Department** would be to **market ASE products and services to local, regional, and international clients**. In this capacity, the Marketing Department markets existing products and gauges market potential for new ones. The Department is to give feedback to ASE senior management derived from client response to current and proposed products.

A detailed procedure that includes marketing steps on how to approach which clients with what products needs to be devised. An **advertising campaign** should be part and parcel of the Department's function and should be linked to other efforts underway or contemplated to promote the ASE.

The **motivation of the Department's staff** can best be assured the further the ASE moves from a public sector culture to a corporate one. Hence, it is recommended that the ASE marketing strategy include a **profit sharing plan** for all ASE employees.

e. Alliances:

As illustrated in ***Regional Leadership*** above, the dynamics of the exchange industry in the Middle East are in a state of flux. Indeed, it remains to be seen how issues of primary concern to international investors, such as the lack of liquidity, are to be addressed outside the context of regional solutions. Hence, relationships **with like-minded exchanges and trading platforms** should be explored by the ASE along the following lines:

- Strategic Alliances:

  A strategic alliance or joint venture between two or more exchanges can start by having **one exchange adopt the other's trading technology or clearing system**.

- Common Access Systems:

  Common access systems take the strategic alliance a step further by allowing for the **creation of a common electronic system to access several exchanges**.

- Common Trading Systems:

  A common trading system for two or more exchanges strengthens the relationship even more.

As to relationships with other stakeholders:

- Studies of company capital structures in emerging markets have found a positive and very significant correlation between company leverage and the extent of the host country's stock market development. This means that **an active stock market actually increases the volume of business for financial intermediaries, including banks.**

- The relationship between the success of an exchange and the fiscal practices pursed by its host government is an intricate one. Experts point out that **stocks and bonds tend to deliver better long-term returns once government fiscal policies are on solid ground.**

- Special attention is being paid to the **privatization of process** and the importance of linking it to the development of the ASE.

f. Corporate Governance:

A stock market is as good as what is being traded on it. Corporate governance issues are of concern to local, regional and international investors. It is highly recommended that the ASE, in close cooperation with the JSC, **continuously monitor and improve corporate governance guidelines adopted by listed firms.**

In this regard, it should also be noted that the ASE does not extend financing to clients. However, several listed firms consistently fail to pay their fees. The ASE has shied away from suspending trading for such securities believing that such action would hurt investors more than it would punish defaulting firms.

This type of cross-subsidy extended by the ASE to listed firms may eventually cast an **element of doubt on the reliability of ASE projected cash flows**. Additionally, the logic of investors being hurt by suspending trading in such securities masks the fact the it is the **lack of institutionalization encouraged by such tolerance** that is more harmful to investors (e.g. such disregard to fulfilling payment obligations by listed firms could easily extend to other rules and regulations).

Additionally, ASE administrators should be **concerned about information asymmetries because a lack of public confidence in an exchange would lead to a decrease in the supply of funds, negatively impacting the functioning of the market. Disclosure is not effective without adherence to efficient accounting standards**.

g. More Securities:

Trade automation facilitates the specialization in products and services offered by the various exchanges. **Expanding the range of securities** and financial products that can be traded on the ASE is a must for the ASE to become a regional competitive provider of trading services.

In addition to equities and bonds, **currencies, financial derivatives, pooled mortgages, agricultural commodities, minerals, and electricity** can be traded. The ASE should conduct studies to determine which products have more regional potential and attempt to build a competitive advantage by offering trading services in those products early enough.

For example, the ASE could consider specializing in the listing and/or trading of **municipal bonds**, Jordanian and Middle Eastern. Given the massive infrastructure financing needs of the region and the large budget deficits faced by many Arab governments, this type of instruments is expected to grow rapidly.

The fact that credit rating agencies have begun to target the region of late paves part of the way for this practice.

Another example would be for the ASE to introduce **Exchange Traded Funds (“ETFs”)**. ETFs are a $40 billion asset class in the United States. They combine the features of an index-tracking fund with the features of a listed share. They can track the performance of major indices (regional and international) and are available for both institutional and retail investors. All types of companies’ securities can serve as underlying products for such funds.

Since automated trading systems can now be custom-made quickly and at relatively low costs to enable trading in many products, this would allow the ASE to expand its market for the types of products that can be traded over it quickly and relatively inexpensively. Strategic alliances with other exchanges and trading services providers can play a significant role should the ASE decide to **target the regional IPO market for fast-growth sectors such as IT.**

h. More Members:

With remote trading for members underway, the ASE should consider offering **remote cross-border access** from other countries. This is a step less than allowing remote access, which can be resisted by local members concerned with losing business to foreign brokers. It would allow for some of the liquidity benefits that accrue out of full remote membership. In this case, local members would have to be utilized in any trading activity from outside Jordan.

However, automation allows the ASE to sell access to all that want to trade over it and charge for this on a transaction basis. This can be achieved by, among other things, offering **remote cross-border membership** to traders and direct electronic access to institutional investors.

Increasing membership by allowing remote access is an important step that many exchanges are adopting to address the current and future needs of clients. Allowing for **more trading hours** and offering **after hours trading** are services increasingly being demanded by investors worldwide.

i. More Listings:

Public shareholding companies are not obligated to list on the ASE. As such, these companies have the best of both worlds. By being public shareholding companies, they are **able to tap into a wide equity investor pool and issue bonds**. By not being listed, they have **avoided the control mechanism that markets exercise on traded companies by constantly adjusting share prices to reflect, partly at least, management decisions.** Hence, it is **difficult to see why**

such firms would consider listing unless an exit strategy is needed by some of the founders. And if this were the case, it would **contradict logic inherent in IPOs whereby founders are usually required to remain in the newly listed company and are only allowed a phased out exit over a number of years**.

Currently, there are 157 listed companies. The ASE has further identified some 30 public shareholding companies that are not listed but that the ASE considers "ripe" for such a step. The ASE is in the process of engaging those firms with the aim of getting them to list shares.

It is recommended that the ASE address the anachronism in the current rules and regulations pertaining to listing whereby:

- **any public shareholding company should be required to list** its shares; and,

- **incentives be provided for private companies to consider going public and list their shares.** These may include such steps as providing **corporate income tax reductions for listing a minimum percentage of shares.**

j. Demutualization:

To continue the process of **separating ownership from membership from management**, it is recommended that the ASE proceed with steps to **corporatize** itself with the aim of achieving **full demutualization** and **becoming a public shareholding company**. Steps to be taken in this regard include deciding on a shareholding allocation process with clear control and voting powers. Ultimately, the ASE shares would be listed on the ASE.

In this regard, it is also recommended that the ASE continue to push for a corporate culture shift from that of a public sector entity to a private sector one.

k. Legal Issues:

- It is **recommended that the ASE undertake, with the assistance of outside experts, a full and comprehensive review of existing legislation, in the form of the Securities Law, Companies Law, and others, to ascertain how such legislation facilitate or hinder its current and future operations**.

- **What is a Non-Profit Entity?**

  Does being a non-profit preclude the making of profits or does it merely mean that a non-for-profit entity cannot distribute dividends? If the answer is the latter, then the **ASE, its management and staff should be given every incentive to make the ASE a profitable entity** since its future survival and expansion relies on this.

- **Members' Liability for ASE Losses:**

  Rules and regulations state that members are to be responsible for any and all losses incurred by the ASE. Such losses are to be covered by members in equal shares, irrespective of their trading volumes. Such coverage is to be treated as a loan from members to the ASE and is to be repaid from future retained earnings.

  The situation is complicated by the fact that **members are not the legal owners of the ASE**. Additionally, **little incentives exist for ASE management and staff to reduce costs and increase revenues.**

- **Brokers' Guarantee Fund:**

  The relevance of such a fund as **one is being put together at the SDC to address clearance and settlement** concerns between brokers.

- **Investments:**

  The law seems to restrict the ASE's ability to **invest retained earnings.** Clarifications in this regard are needed.

- **Streamlining of Authority:**

  The **ASE's powers to inspect and sanction brokers is limited** by the JSC's powers in this regard. The JSC is the entity that can sanction violating brokers. For example, any violations to the code of ethics cannot be sanctioned by the ASE; it can only recommend action to the JSC.

- **Dispute Resolution:**

  New procedures to resolve disputes between brokers and between brokers and clients are being formulated. The draft regulations call for the appointment of an **ad hoc arbitration rather than institutional**. As the draft stands, a committee of three arbitrators is formed; two chosen by the disputing parties and the third to be chosen by the selected two.

The way the draft stands places **too much emphasis on disputes pertaining to local trading and investors rather than those involving foreign institutional investors**. It may be worthwhile to explore the viability of having in place a panel of experts from which the arbitrators can be chosen with a classification for simple disputes (e.g. less than JD10,000).

l. Other:

- It is recommended that the ASE undertake an exercise to **map out upcoming expenses in light of its move to its new headquarters**. This should be done in conjunction with current efforts to ascertain future IT needs carried out by USAID/AMIR consultants.

IV. NATURE OF DEMAND

1. What is an Exchange?

A basic assumption underpinning any market is that the potential for **trade can make people better off**. Indeed, buyers and sellers can create, or enhance, value by building a market.

Liberal exchange literature defines an exchange as any organization, association, or group of persons, incorporated or not, that constitutes, maintains, and/or provides a marketplace or facilities for bringing together buyers and sellers of securities.

Hence, **an exchange could be viewed as a market, as a firm, and as a broker/dealer.**

Viewed as a market, an exchange must:

i. provide **trade execution** facilities;

ii. publicly **disseminate information** (especially price information);

iii. engage in **price discovery**;

iv. have a structure that ensures the **entry of buy and sell orders** on a regular basis so that both buyers and sellers have a reasonable expectation that they can, on a regular basis, execute orders at certain quotes;

v. **centralize (but not necessarily in a physical sense) trading** to facilitate execution;

vi. have **members**;

vii. provide **fair representation** in its management structures to members and other stakeholders;

viii. **monitor compliance** by its members with the securities laws and function as an efficient self-regulatory organization; and,

ix. provide for **liquidity**.

As a firm, an exchange produces three services: listing, trading, and settlement. As a broker/dealer, the exchange is **an intermediary among intermediaries,** gathering trading orders and facilitating their execution.

2. Why a Stock Exchange in Jordan?

Financial markets, or exchanges, play a crucial role in facilitating the intermediation between savers and investors, thereby helping **translate savings into investments**. The more efficient this process is, the less the cost of investing. **The less the cost of investing, the higher the rate of investment/saving**. This, in turn, usually leads to **higher rates of economic growth** for any given country.

More specifically, exchanges fulfill four basic functions. They:

a. provide **information signaling** as to the value of financial instruments, which provides the basis for investment and issuance decisions;

b. allow for the **storage of wealth** via facilitating the creation and trading of savings instruments;

c. allow for **risk sharing** via diversification; and,

d. function as a **source of capital**, both domestic and foreign.

It is this last function that is particularly relevant to developing countries and pre-emerging markets such as Jordan. The fact that capital is often not readily available in such countries and markets leads to negative effects on economic growth.

Critics of the effects of exchanges on the economies of developing countries usually put up the following observations:

i. Exchanges in developing countries are a speculative play. Prices and volatility cannot be explained by the underlying fundamentals. This, in turn, tends to generate adverse effects for capital formation and overall economic welfare.

ii. Market discipline cannot be established in developing countries because of disclosure problems, costly monitoring, inefficient enforcement mechanisms, and a lack of informed investors.

iii. Exchanges can destabilize a developing country by allowing for the rapid inflows and outflows of capital.

However, these criticisms are countered by proponents of exchanges in developing countries who emphasize the following:

- an active stock market increases the efficiency of investment because of the control imposed on the behavior of companies through continuous adjustment of their share prices in the market;

- an active stock market lowers the cost of equity capital and, as a result, increases investment and economic growth by spreading the risks of long-term projects among many investors; and,

- an active stock market can attract foreign portfolio capital and foreign direct investment, increase domestic resource mobilization, and, as a result, expand the resources available for investment.

  For developing counties in particular, international portfolio flows tend to decrease the cost of capital by allowing investors to share the risk of projects with other investors. They also seem to lead to permanent increases in valuations. However, developing countries and pre-emerging markets need to prepare to receive such flows in a way that helps them avoid the pitfalls and allows them to maximize the benefits.

3. A History of the Establishment of the ASE and Its Present Status

A brief look at the new ASE web site conveys a summary picture of the history of securities trading in Jordan which dates back to the 1930s. Shares of a few companies started trading back then. A few corporate bonds were first issued in the 1960s.

The Amman Financial Market was set up in 1976 to create a market for the trading of securities and to regulate this process. The AFM started operations in 1978. The goals of the AFM, as prescribed in the law, were:

a. to mobilize savings by encouraging investments in securities;

b. to channel savings to serve the interest of the national economy;

c. to regulate the issuance of and the dealing in securities in a sound and speedy manner consistent with guarding the nation's financial interests and those of small savers; and,

d. to produce needed data and statistics.

However, this dual role of a regulator and market could only be borne for a limited time by the AFM. As part of Jordan's push to upgrade its capital markets, a new **Securities Law was enacted in 1997**. It called for the **separation of the supervisory and legislative roles from those entailed in operating an exchange**.

As a result, three new institutions were created: the ASE, SDC, and JSC. The Law specified that the **ASE is a non-profit independent juridical entity that is autonomous both financially and administratively**. It is the **only entity within Jordan that is authorized to function as an exchange for the trading of securities** and is to be managed by the private sector.

The ASE officially started operations on March 11, 1999. Its functions, as specified by the Securities Law, are:

a. to provide the proper environment to secure the interaction of supply and demand forces for listed securities by establishing proper, clear and fair trading rules necessary to achieve price discovery and trade;

b. to provide the trading floors, connections and telecommunications lines necessary for trading;

c. to monitor trading and coordinate with the JSC on surveillance matters in a way that would guarantee the rights of investors and that does not permit fraud in trading;

d. to prepare and publish reports and information related to ASE activities;

e. to voice opinions on legislation and proposed amendments related to ASE functions and to suggest amendments to such legislation and other regulations pertaining to the protection and development of the financial market;

f. to establish communication links and cooperative relationships with exchanges, associations and international organizations in the field of securities; and,

g. to establish parameters for professional conduct and principles of honest and fair work ethics for its members.

Since its establishment, the ASE has moved on six spheres to fulfil its duties. **First,** it put together **rules and regulations** necessary for its operations. These include:

i. the ASE's internal by-laws;

ii. adjusting the old AFM rules, as a transitionary step, and applying them in regards to trading, listing, de-listing, and auctioning of securities;

iii. establishing parameters for professional conduct for the ASE;

iv. establishing disclosure rules for the ASE;

v. setting commissions and fees rules for the ASE; and,

vi. establishing financial and administrative rules pertaining to the ASE's administrative structure, financial system, procurement system, signatory powers, travel and transportation allowances, Board of Directors' compensation, employment rules, employee savings fund, and employee medical treatment rules.

Second, the ASE started implementing **electronic trading**. This was a continuation of an effort that dates back to 1996 when an agreement was signed between the AFM and the Paris Bourse. The transition to electronic trading from manual is being carried out in a gradual manner, with batches of companies being transferred to electronic trading in full cooperation with the SDC.

The ASE is currently equipping an electronic trading floor, connecting members' offices to the trading floor, and addressing other IT needs and requirements. USAID/AMIR consultants are in the process of drawing up an IT needs assessment report that would serve as the basis for future procurements.

Third, the ASE paid special attention to increasing **awareness** of its activities domestically and internationally. It started publishing a newsletter and a statistical bulletin on a monthly basis in both Arabic and English. The ASE is pursuing agreements with information vendors, such as Bloomberg, for the provision of online and other data in addition to agreements it already has with Reuters and the local Access. It published and distributed various laws and rules and is in the process of finalizing an Internet web site via an USAID/AMIR grant. The ASE expects to continue promoting itself through international publications such as its previous efforts with Institutional Investor.

Fourth, the ASE continues to emphasize the need to develop **membership** with three new members licensed in 1999 and one so far for this year.

Fifth, the ASE continues its efforts to increase **listings**.

And, **sixth**, the ASE has joined the Union of Arab Exchanges, FEAS, is an associate member of FIBV, and continues to be active in **international forums**.

For the future, the ASE is planning to move to new offices by the end of this year. It aims to continue efforts to **increase market liquidity** to attract local, regional, and international investors; engage itself in the national privatization program; continuously monitor and increase **investor protection** measures; strive for better **transparency and disclosure** rules to meet international standards; adopt **International Accounting and Auditing Standards**; **curb insider trading** and fraud; conduct local investor awareness and education programs; and, join hands with other stakeholders to increase the level of activity in the **bond market**.

V. PRODUCTS AND SERVICES

1. The Product

a. Products and services the ASE offers:

The ASE offers three types of products:

i. **listing services;**

ii. **trading services; and,**

iii. **price-information services.**

The fourth service of clearance and settlement that is in theory part of this production cycle is spun off to a separate entity, the SDC, as is the case with may exchanges worldwide.

b. Benefits to clients:

ASE clients include members/brokers, investors, and listed companies. These clients can make two sets of choices: which exchange/s to list or trade on and through whom. **In selecting an exchange, clients are impacted by:**

i. the overall **quality, reputation, and fiscal regulation** of the exchange;

ii. **cost** factors; and,

iii. **market microstructure** in terms of **liquidity, price discovery, and quick execution.**

Additionally, an exchange should be able to offer the following benefits:

- **Network Benefits**:

Whether automated or floor-based, an exchange can be viewed as a communications network with rules as to what messages can be sent over it, whom can send those messages, and how such messages become trades.

As such, the **benefit to market participants increases as the number of locations from which the exchange can be accessed increases, and as the number of overall market participants increases**. Recent exchange literature draws a direct linkage between this "network" effect and a market's liquidity.

- **Automation Benefits**:

The 1990s have witnessed a large increase in the number of electronic trading systems and in their market share of total trading. Although debate is still ongoing as to the relative benefits of such systems, it could be said that they provide for lower operating costs and the possibility of remote access to the market, both of which should lead to increases in liquidity.

- **Diversification Benefits**:

Exchanges allow market participants to diversify wealth into liquid assets.

As the ASE continues to improve on these points, it should be able to attract more domestic, regional, and international investors, traders, and companies that want to list (Please see “Clients”).

c. Basis of Product Specification

It could be said that corporate financiers deal with the issuers of securities and the choice between various financial instruments; capital markets practitioners deal with the pricing of securities and the role of intermediaries; and, **market microstructure administrators deal with how securities are traded and what influence the trading system has on an exchange's success.**

However, **trying to attribute the success of a particular exchange to one or more aspects of its microstructure can be misleading**. This is particularly true since experts do not agree as to the optimal exchange design. Additionally, an exchange is a complex system that involves many interrelated factors.

However, most agree that microstructure does have a strong impact on a particular exchange. An exchange's microstructure influences the specifications of the products an exchange offers to its clients.

The ability of an exchange to attract investment depends on its institutional nature, which is a result of the interaction between its regulatory structure and microstructure. This interaction determines who can participate, what instruments can be traded, and the trading costs. Hence, **an exchange's microstructure, by impacting its liquidity and trading costs can make an exchange more or less attractive.**

Since the choice of a trading system and other institutional features influence trading and price on an exchange, exchange administrators and regulators should have efficient determination of prices and lower transaction costs as their primary goals when designing or selecting an exchange's microstructure.

And, although it is true that supply and demand alone determine prices, **microstructure does impact prices** by making it easy or difficult, less or more costly, to trade. Microstructure also impacts prices by allowing more or less information to be provided to traders, thereby influencing their trading decisions. And, it impacts the way incoming orders to buy and sell are matched, which impacts the trade price.

Typically, a trading system fulfills three functions:

- *trade execution*: the process by which orders are transformed into trades;
- *order routing*: the process of delivering orders from investors and broker/dealers to *trade execution;* and,
- *data dissemination*: transmitting pre- and post-trade data about quotes and trades to market participants.

A trading system can be one of three basic microstructures:

i. *Continuous Limit Order Book System*

In a *Continuous Limit Order Book System*, bids and offers can be submitted to the market continuously during trading hours and transactions can occur at any time during trading. All such systems have a price discovery mechanism whereby price is determined within the system based on order flow and regulations regarding priority and execution. Some of these systems have market maker operations.

ii. *Single Price Auction System:*

In a *Single Price Auction System*, bids and offers can be submitted over a period of time but all trades are executed together at one price at one time. As such, price discovery is part and parcel of these systems.

iii. *Passive Pricing System:*

Passive Pricing Systems determine execution prices by referring to activity on other markets. As such, they do not have a price discovery mechanism.

To further explain, *Continuous* auction trading can be applied through several techniques. However, the main two applications are *Dealer Markets* and *Order-Book Markets*:

- *Dealer Markets* exhibit dealers who are responsible for offering prices at which to buy or sell securities. As such, the dealer is in charge of "maintaining" the market and is rewarded for this via the bid-ask spread and other privileges. A good example of an electronic *Dealer Market* is Nasdaq. (Please see “Notes on Market Makers”).

- *Order-Book Markets* have traders place the prices at which they are willing to buy or sell a security in an "order book." Orders are matched and transactions take place. As such, buyer orders determine transaction prices, which tend to reflect information known to them. No one is in charge of "maintaining" the market.

Other variations on *Continuous* auction trading include the way orders are processed. This can take the form of orders transacted at market prices, *Market Orders*, or at a specified price, *Limit Orders*. Differences also exist in the extent of automation. For example, some markets are completely automated while some are automated for most shares.

In designing an exchange's microstructure, two basic elements are considered: the **efficiency** of the alternative trading technology and relative **cost.**

Although a common definition of **market quality, or efficiency**, is difficult to come by, three factors are typically focused on to discern this: **Liquidity, Informational Efficiency**, and **Volatility**.

Liquidity is a multidimensional factor. It can be viewed in terms of the size of the bid-ask spread and market depth. As such, Liquidity is the ability to buy or sell quickly and with minimum impact on prices. Liquid markets attract more participants. This increases prices and reduces the cost of capital because as Liquidity increases, the required return decreases. (Please see “Notes on Liquidity”).

The speed factor in Liquidity depends on the number of traders and microstructure. It stands to reason that the more traders there are, the more likely orders can be matched. However, an exchange's microstructure puts constrains on trades regardless of the number of traders. For example, it may impact the number of days per week that an exchange can operate or the number of trading hours per day.

Market depth is the ability to transact at current prices, even for large orders. Here, again, microstructure has its effects. For example, a continuous market may be thinner than one which employs batch orders, indicating the tradeoff between depth and speed in selecting a particular microstructure.

Additionally, recent studies have found that although depth is a significant factor contributing to the development of exchanges in developing countries, other country-specific factors play as important a role as depth. These include industrial policy, foreign investor controls, exchange regulation, and exchange operation infrastructure. As a result, it is difficult to say that certain levels of depth are necessary to enable the development of an exchange.

The size of the bid-ask spread is typically used to measure liquidity across markets. An important differentiation is between the realized versus the quoted spread. (Please see “Notes on Market Makers”).

Informational Efficiency denotes a market's ability to quickly and correctly incorporate information into prices. It is indicative of market quality in two ways: slower revelation raises the cost of trading; and, asymmetric information effects. Hence, uninformed traders tend to avoid an inefficient market since trades could be had at unfavorable prices. This translates into less Liquidity.

Microstructure can increase Information Efficiency in two ways:

- Through the information services it provides to market participants. The availability of information decreases uncertainty, increasing interest in the market and, as a result, Liquidity.

- Through the trading system by allowing for transparency and objectivity, especially in automated trading systems. Market participants can view volumes and prices on a transaction-by-transaction basis, which is not possible without the use of computers.

To further explain, an equilibrium price is a price that assimilates all available information regarding a particular trade. However, in reality, two dynamics tend to skew this.

First, information does not arrive all at once but over a period of time and its assimilation by market participants can only start after it is revealed to them through placed orders. Second, information is not available in one bundle but tends to be dispersed.

As a result, transaction prices seldom resemble the true equilibrium price, which leads to Volatility. It is here that the function of an efficient information system becomes clear. Such a system enables traders to incorporate new information faster into new orders, leading to a reduction in Volatility.

As in choosing a proper trading system, the choice as to what kind of information and how much of it should be provided on trading volumes and prices to market participants is a crucial decision that microstructure architects have to struggle with. Some of the alternatives are:

- Providing traders and subscribers with a complete record of the existing order book and information on all transactions that occurred during the current trading session.

- Providing summary information on the market including the three best bid and offer prices, the most recent transactions, and the day's highs and lows.

- Providing information on the two best outstanding quotes at any time along with the previous day's closing price.

Hence, automation allows for information to be distributed equally among investors, both on and off the floor. Economic and technological constraints do play a role in how much information on what aspects of trading is to be distributed to whom.

However, Volatility is driven by economic fundamentals that impact prices. Microstructure can be used to isolate basic *Volatility* from "trading noise": fluctuations in prices resulting out of asymmetric information or temporary order imbalances. Examples of microstructure techniques used to achieve this include circuit breakers, which stop trading when price changes exceed a certain threshold, allowing for a cooling-off period for new information to be disseminated by the market and assimilated by investors. Again, a tradeoff exists between reducing Volatility and increasing Liquidity in a market.

Recent studies have indicated that the choice of a particular trading system should move from **efficiency**, or quality, considerations to those of **cost.** Recent literature indicates that although market quality may differ between competing microstructures in some aspect, this is usually offset by another.

Hence, the assumption is that new technology adoption requires clear cost advantages. And although this is more relevant to the establishment of new exchanges, it does relate to existing ones that seek to alter their microstructures.

Two parameters are typically used to assess trading costs in this context. These are:

- Fixed costs associated with a trade, such as taxes and commissions. And,

- Bid/Ask spreads, which are the difference between the price a buyer pays and the price a seller receives. The spread reflects several factors such as the different valuation models employed by the seller and the buyer. It also reflects microstructure characteristics. A good example would be the choice of having a market maker, which increases liquidity but also widens the spread. The microstructure could call for multiple market makers, reducing the spread somewhat. Or it may not allow for such practice, thereby decreasing the spread along with liquidity.

d. Why clients will buy ASE products and services rather than those of competition?

One way of viewing ASE clients would be in terms of **captive versus non-captive clients.**

For listing services, captive clients are those companies that are not able or are not willing to list on other exchange for reasons such as lack of financial resources, lack of knowledge, or an unwillingness to expand the shareholder base. For such clients, there is no alternative but to list on the ASE.

However, for Jordanian companies who do look for a wider investor base and who posses the resources to do so, listing on another exchange, either in the form of depository receipts or other, is an alternative.

For trading services, local brokerage houses are de facto members in the ASE and although several would appreciate remote access into other exchanges, trading on the ASE would continue to be a basic source of income.

Likewise, domestic investors who have the wherewithal to invest outside Jordan would do so. Since information asymmetry is usually in favor of domestic investors, locals should continue to invest in companies listed on the ASE. However, it should be noted that an exchange is only as good as what is being listed and traded on it.

It is highly recommended that the ASE formulate a competitive strategy that would, among other things, help it **compete on the merits of the products if offers rather than continue to depend on the captivity of its clients** (please see "Competitors").

As for international investors, they are interested in developing markets for two reasons: the high returns that could be had by investing there; and, the benefits of diversification. However, both goals could be severely undermined if the microstructure of a particular exchange was not up to par.

e. Strengths and weaknesses of the ASE products and services versus existing competition:

A fully functioning market has answers to the following questions:

- What is being traded?

- Who will a trader potentially consider trading with?
- When and where will traders trade?
- What are the rules of engagement?
- How will trades be settled?
- How will traders resolve post-trade disputes? And,
- What will traders disclose about their trades to other traders?

There are no black and white answers to these questions. The ASE should continue to address these issues in a manner that strengthens its competitive advantages vis-à-vis other exchanges; regional, international, and virtual.

Expanding the range of securities and financial products that can be traded on the ASE is a must for the ASE to become a regional competitive provider of trading services. **Increasing membership by allowing remote access** is an important step that many exchanges are adopting to address the current and future needs of clients. Allowing for more trading hours and offering after hours trading are services increasingly being demanded by investors worldwide.

Additionally, by engaging the various stakeholders in a continuous process of improving trading rules and regulations, the ASE can make sure that it is keeping up with the latest developments in its industry and, perhaps, setting the regional agenda for such developments.

It should also be noted that once a particular microstructure is adopted, it is increasingly difficult to change as it becomes more and more entrenched. This problem is further complicated by the fact that no one design is found to be optimal. Hence, the **ASE should continuously monitor its trading mechanism to guard against real and potential problems.**

One of those problems may be adverse selection resulting out of information asymmetry. Studies are needed to ascertain whether the problem exists for both liquid and illiquid stocks on the ASE. And, if so, recommend ways in which this problem can be alleviated.

To illustrate, continuous trade can improve liquidity and price efficiency for many stocks. Recent studies showed that stocks transferred from single daily auction to continuous trade experienced:

- a permanent price increase;
- a considerable trading volume increase;
- a significant decline in price volatility; and,
- a faster adjustment of prices to information.

However, **for thinly traded stocks, unaided continuous trading may not be the best answer**. Concentrating all trading in one daily session can achieve a reliable market-clearing price.

Additionally, small firm stocks have a high probability of informed trading and uninformed traders may end up trading at unfavorable prices. This causes them to shy away from such stocks. In auctions, there is an averaging of all traders' processes rather than bilateral trading.

The ASE’s trading system allows for continuous, fixed, and multi-fixed trading. Studies are needed to ascertain to what extent such a structure helps alleviate information asymmetry for the various types of companies listed.

f. How the ASE will improve, transform, or replace existing products?

Too often, institutions get locked into their own business model and become reluctant to challenge their modus operandi by looking at new technologies, new products and services, or new distribution channels. They become more focused on what the customer wanted yesterday and neglect addressing the customer needs of tomorrow.

The ASE should continuously challenge itself and look at new ways of augmenting its competitive advantages at home and abroad. Perhaps the most significant step that the ASE has taken is to start implementation of electronic trading.

Some of the other strategies that should be considered include:

- **ASE as a Regional Adapter**:

  Advances in automated trading have impacted the way exchanges deliver their trading services to investors. The increase of automated trading systems that cannot communicate with one another directly has led to the emergence of adapter systems that aim to allow investors access across several exchanges while reducing access costs. This is typically achieved via the provision of standardized interface across the different exchanges.

Akin to electronic brokerage firms, these adapter systems become members in several automated exchanges through electronic interface. Adapters are then marketed to institutional investors who want to access several exchanges from one entry point. Examples of such operations include Instinet (owned by Reuters), Lattice Trading (owned by State Street Brokerage) and PrimeTrade (owned by CSFB).

The ASE may very well consider offering such a service that would tie in several Middle Eastern exchanges into one system accessed through the ASE.

- **More Products:**

  Trade automation facilitates the specialization in products and services offered by the various exchanges.

  The ASE may very well consider allowing trading in more securities and financial products, serving the regional market. In addition to equities and **bonds, currencies, financial derivatives, pooled mortgages, agricultural commodities, and electricity can be traded**. The ASE may conduct studies to determine which products have more regional potential and attempt to build a competitive advantage by offering trading services in those products early enough.

  An example would be for the ASE to introduce **Exchange Traded Funds** ("ETFs"). ETFs are a $40 billion asset class in the United States. They combine the features of an index-tracking fund with the features of a listed share. They track the performance of major indices and are available for both institutional and retail investors. All types of companies' securities can serve as underlying products for such funds.

  Since automated trading systems can now be custom-made quickly and at relatively low costs to enable trading in many products, this would allow the ASE to expand its market for the types of products that can be traded over it quickly and relatively inexpensively. **Strategic alliances**

with other exchanges and trading services providers can play a significant role here.

- **More Members:**

Automation allows the ASE to sell access to all that want to trade over it and charge for this on a transaction basis. This can be achieved by, among other things, offering **remote cross-border membership** to traders and **direct electronic access to institutional investors.**

Laws and regulations permitting, the ASE should market itself to remote members in other countries. As illustrated in the point above, automated exchange members have been expanding their "screen" access cross-border. They are driven partly by the realized gains in cost reductions accruing from accessing several exchanges from one efficient entry point.

Form an intermediary's point of view, an exchange offering remote access offers some or all of the following advantages:

a. direct access to information;

b. lower transaction costs;

c. higher correlation with other markets;

d. increased liquidity; and,

e. better price discovery.

To achieve remote access, an adapter is used. As illustrated above, an adapter is basically a computer connection linking the foreign intermediary to the host exchange.

- **Cross-Border Trading:**

Laws and regulations permitting, the ASE should seriously consider offering **remote cross-border access** from other countries. This is a step less than allowing remote access, which can be resisted by local members concerned with losing business to foreign brokers. It would allow for some of the liquidity benefits that accrue out of full remote membership. In this case, local members would have to be utilized in any trading activity from outside Jordan.

- **Combination Trading:**

  The ASE could look at developing proprietary software that would capitalize on the existing gap between investors' desire to acquire specific combinations or baskets of assets and the ability of trading institutions to provide trading services for individual assets. Although the question of whether investors will increasingly demand to trade baskets of assets is still an open question, it may be worthwhile for the ASE to explore, on a proprietary basis or in joint venture with others, such as local IT firms, the concept of trading combinations of securities over electronic networks.

- **IT:**

  Securities markets are basically markets in information. Market microstructure can improve an exchange by increasing the amount of information it receives, processes, and disseminates to actual and potential customers. As such, the ASE is one of Jordan’s main IT plays. It is both a content and a linkup provider. It is recommended that the ASE further explore this business model to ascertain ways in which it can offer business-to-business and business-to-consumer e-commerce products related to exchange trading.

2. The Production Process

a. Location:

The ASE is currently located at the Hamzah Building. The Hamzah Building also houses the new SDC and is near to The Housing Bank Building, which houses the SEC and many of the brokers. This is a temporary arrangement until a new building that will house the three entities is finished at the end of this year.

Neither the current nor future location of the ASE is expected to have a significant impact on the cost of production. Technological improvements with regard to IT linkups have rendered transportation considerations almost useless. As a result, the availability of raw materials and labor is not impacted by the ASE location choice.

b. Facilities, Equipment, and Software:

Pursuant to an agreement between the old AFM and the Paris Bourse, the ASE received and installed an **electronic trading system** paid for by a grant from the French Government. The system started operations this year with companies being transferred gradually from manual to electronic trading. Trade orders are electronically entered into the system. Clearance and settlement will also take place electronically via a link with the SDC.

The ASE is currently **negotiating a maintenance and upgrade agreement with the Paris Bourse.**

Additionally, **USAID/AMIR consultants will be producing an IT needs assessment report** that will be used as a basis for procurements. The main goals of this activity will include improving communications with investors and members.

As the ASE is planning to move to new facilities by the end of this year or early next, a **layout plan for the new premises should be drawn up as soon as possible.** The plan must be compatible with the ASE's business operation plan and IT needs.

c. Process:

The ASE offers three services: listing, trading, and information dissemination.

To produce these services, the ASE has been utilizing two basic markets: the Primary Market, where securities are issued; and the Secondary Market, where securities are traded. Although this structure is about to change, a brief review is illustrative:

- Information and liquidity have been produced by the Secondary Market. The Secondary Market was divided into three sub-markets:

  i. The Regular Market:

  Trading of listed companies that meet certain requirements took place in this market.

  ii. The Parallel Market:

  A market with more flexible listing requirements.

  iii. The Bonds Market:

  Trading in Government and corporate bonds takes place in this market.

- Additionally, Off-Floor trading takes place for unlisted companies, inheritance and family transfers.

The ASE operates Sunday through Thursday according to the following schedule:

- The Parallel Market/Manual: 9 AM to 9:30 AM;
- The Bonds Market/Manual: 9:45 AM to 10 AM;
- The Regular Market/Manual: 10 AM to 11 AM;
- The Regular Market/Electronic: 11:30 AM to 12:30 PM

  with pre-opening sessions taking place for

  Fixing 11:30 AM to 12:25 PM

  Continuous 11:30 AM to 11:45 AM; and,

- Block Trades/Electronic: 12:30 AM to 12:40 PM

Some of the relevant points in the new electronic trading system are:

- Brokers should have written authorizations to trade on behalf of clients. Instructions over the telephone will be recorded.

- Only ASE-licensed brokers can enter orders into the trading system. Brokers have to pass a certification examination to be licensed.

- Securities are traded on a continuous, fixed, or multi-fixed basis, depending on parameters determined by the ASE Board of Directors.

- Sessions for fixed and multi-fixed trading are divided into the following stages: pre-opening, opening, post-opening, pre-closing, and closing.

- Continuous trading sessions are divided into the following stages: pre-opening, opening, continuous trading, pre-closing, and closing.

- Orders are entered into the system during the pre-opening stage for all trading session and orders are shown on the company's record. The trading system calculates an Indicative Equilibrium Price (IEP) after each entry and the new IEP is shown accordingly. The IEP is calculated according to a certain set of parameters.

- Orders are executed during the opening stage for all trading sessions at the final IEP calculated at the moment the opening stage starts.

- For continuous trading, orders are executed first according to best prices and second according to priority.

- The ASE Board of Directors has the authority to change the 5% upper and lower daily price fluctuation limits.

- Orders can be open, market, or limited.

- Brokers can change or cancel unexecuted entered orders during the pre-opening stage, post-opening stage, and continuous trading. However, such changes cause an order to lose its priority.

- Divisible orders are not possible; the broker must list a client for each order.

As to information dissemination, the ASE currently provides the following:

- A free monthly newsletter that includes ASE news for the month along with decisions of the Board of Directors, information of trading volumes, indices, and foreign investment, among others.

- Online trading data is being provided via Reuters and the local Access. A further agreement with Bloomberg is expected to be signed soon.

- An Internet site is being put together that would enable browsers to access all kinds of information on trading and listed companies. Information provided will be segmented and priced accordingly.

The aim is to have market data dissemination to all brokers offices via a Wide Area Network ("WAN") and to enable brokers anywhere in the world to receive live market data via the Internet.

The trading system's capacity can handle up to 15,000 transactions per day. Because of its modular nature, this capacity can be increased, if needed. Daily trades are expected to hover between 1000-1500 once full automation is achieved.

VI. MANAGEMENT AND ORGANIZATION

1. Staffing

a. Staffing Requirements

The quality of management is crucial to the success of the ASE. The ASE should be **competitive with compensation** to attract some of the best local talent to its ranks. For senior management positions, short resumes should be included in the organizational structure.

Currently, there are 25 employees in total working at the ASE. Almost all were employed by the former AFM. Pursuant to the breakup of the AFM, these employees were transferred to the JSC. They were seconded to the ASE as of January 1, 2000.

b. Local versus Foreign Staff

No foreign staff is currently employed at the ASE. The ASE does not have any future plans to do so.

c. Timetable to Full Staffing

Taking into consideration the current workload and near-term development plans, the ASE should be able to achieve full staffing according to the following schedule:

- 4 additional staff members by the middle of 2000;
- 4 additional staff members by the middle of 2001; and,
- 3 additional staff members by the middle of 2002.

(For job description, please see below).

However, should near term and future development plans change, a **Staffing Needs Assessment Report** should be drawn up to assist the ASE in hiring and maintaining needed talent to realize its future goals.

d. Which sponsors and stakeholders are providing members of the management team?

Only the Board of Directors includes representatives of members (five). No other members of the management team come from sponsors or other stakeholders.

e. Training Issues

Even though technology is critical to the future of any exchange, people remain its most important resource. As a matter of fact, for the financial industry as a whole, and for exchanges in particular, an insatiable appetite for talented individuals exists.

ASE by-laws state that the Board of Directors is responsible for organizing training courses for ASE staff.

USAID/AMIR consultants have put together a training action plan for professionals in Jordan's capital market. Training for ASE staff under this program include:

i. *Training on Underwriting:*

Issues and process, public offerings, and terminology and procedures.

ii. *Training on Investments, Investors, and Investor Protection:*

Survey of investment products, the investor as a customer (risk tolerance and financial advisory), and investment funds.

iii. *Issuers, Corporate Governance, and Capital Raising:*

Shareholder communication, financial systems, business strategy, decision-making, and environment.

iv. Advisory Services:

Market research, information dissemination, and business plans.

v. Capital Markets Law and Regulations:

Exchange regulation and capital markets.

vi. Market Analysis:

Analytical techniques.

Additionally:

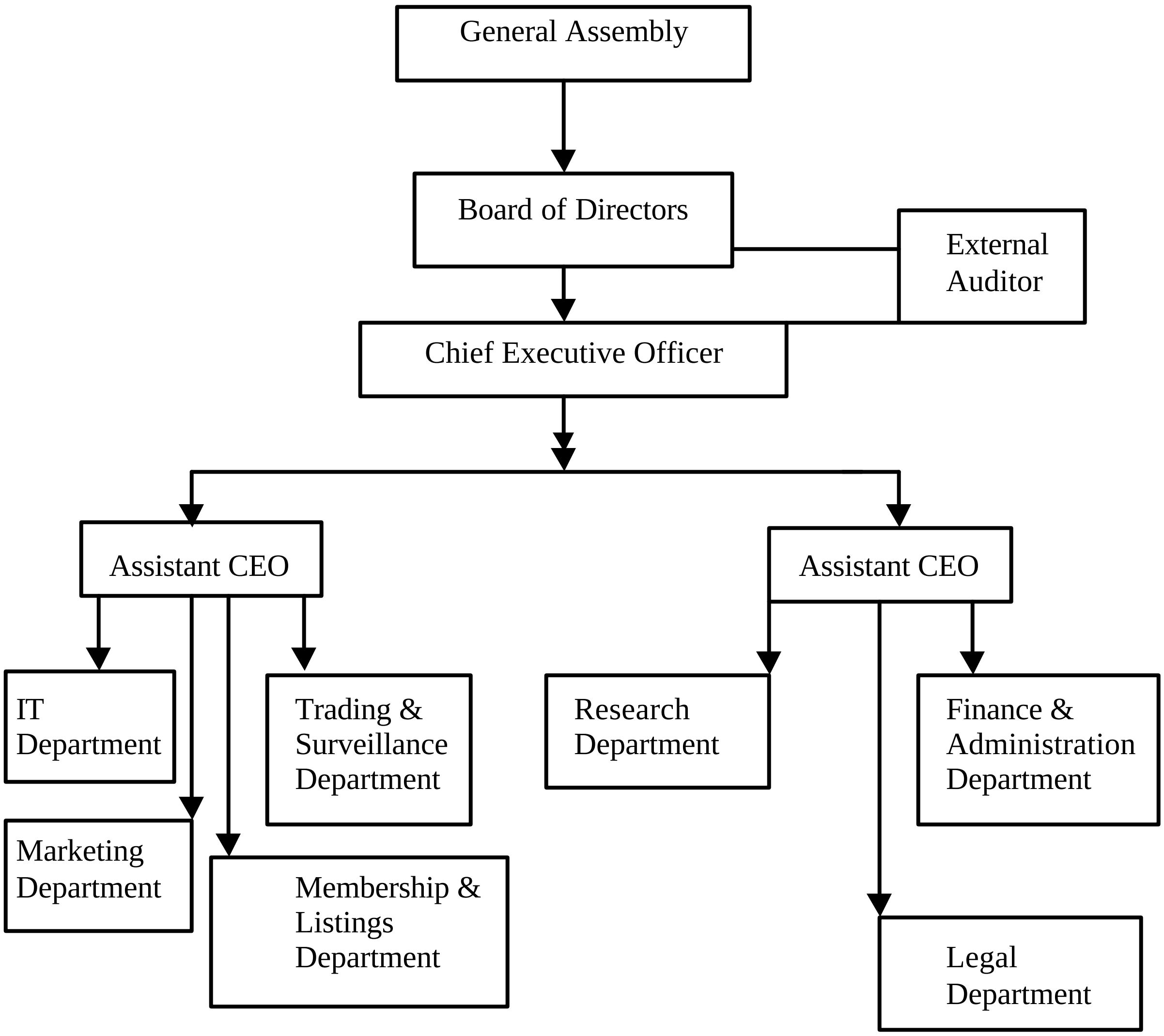
- ASE management may wish to increase training on surveillance issues based on the trading system software.
- IT training needs should be assessed and addressed.
- Training may also be required on general management and administrative issues such as producing memoranda and writing reports; what it means to move the ASE from a public sector culture to a private sector one; change management; and, team work.

2. Organizational Issues

a. Organizational Structure

ASE by-laws require that the Board of Directors lay out the organizational structure as well as staff, financial and administrative regulations.

The following is a suggested organizational structure for the ASE based on what exists already:


General Assembly
Board of Directors
External Auditor
Chief Executive Officer
Assistant CEO
Assistant CEO
IT Department
Trading & Surveillance Department
Research Department
Finance & Administration Department
Marketing Department
Membership & Listings Department
Legal Department

b. Function of each department

i. General Assembly:

The General assembly is composed of members who have paid their ASE association fees and annual subscriptions. Currently, there are 33 members. Each member has one vote. The General Assembly elects five out of the seven members of the Board of Directors.

Recommendations:

m. The General Assembly does not include members other than brokerage houses. It is recommended that the General Assembly include other members such as listed firms.

ii. Board of Directors:

The Board of Directors manages the ASE. It is made up of seven members; three are representatives of brokerage firms, two are representatives of banks licensed to perform brokerage services either directly or via subsidiaries or sister companies, and two are representatives appointed by the JSC.

Recommendations:

- It is recommended that Board representation also include representatives of listed firms.

iii. Chief Executive Officer (CEO):

The CEO is appointed by the Board of Directors and is charged with implementing the Board's policies and decisions. The CEO is in charge of all administrative, financial and technical matters at the ASE. In this capacity, the CEO is also in charge of managing the trading process.

Recommendations:

- The CEO should spearhead an initiative to formulate a competitive strategy piece for the ASE (please see "Competitors").

iv. *Two Assistant CEOs:*

Recommendations:

- It is recommended that department reporting and supervision be divided between the two Assistant CEOs.

  One Assistant CEO would be responsible for the Trading, IT, Members & Listings, and the new Marketing departments.

  The other would be responsible for the Finance & Administration, Legal, and Research departments.

v. *IT Department:*

The Administrative Regulations of the ASE describe the functions of the "Computer" Department as:

- the Department is responsible for all information systems;
- it is to control, maintain, and update protection procedures for such systems, software and equipment;
- it is to follow up on requirements by the various departments concerning equipment and software;
- it is to undertake programming responsibilities;
- it is to undertake analysis and training; and,
- it is to supervise the connections with other institutions.

The IT Department is headed by an Acting Head and has one computer engineer. It is responsible for daily operations of the trading system and receives technical support via telephone from a help desk in Paris.

The Department undertook the installation of a fiber optic cable to the offices of the Export & Finance Bank as a pilot project to test the viability of linking various members to the ASE. It also testing a program procured via a USAID/AMIR grant to disseminate real time information to brokers. As stated in this Business Plan, USAID/AMIR consultants are in the process of drawing up an IT needs assessment report that could be used to support further procurement for the ASE.

Recommendations:

- The name of the department to be changed to the IT Department.
- The Department to undertake IT Research & Development activities, with the aim of developing proprietary software.
- Continuous training programs should be established whereby staff IT skills are upgraded on a regular basis.

n. The development of a centralized database for the ASE should be looked into and the role of the IT Department in such an initiative should be defined. Such a database would include output from trading activities, archives, information on listed companies, rules and regulations, decisions of the Board of Directors, etc. The database should be augmented by an MIS system for applications to be used by various departments.

vi. Research Department:

The Administrative Regulations of the ASE describe the responsibilities of the Research & Public Relations Department as:

- conducting studies and economic and financial research;

- gathering information and documents from the various departments;
- preparing the official and regular publications;
- calculating indices;
- supervising the database and its users;
- supervising information vendors;
- preparing for conferences and seminars;
- promoting the ASE;
- organizing visits; and,
- conducting ASE relations with the rest of the world.

The Department has an Acting Head and two staff members.

Some of the main publications of the Department include the ASE Annual Report and the Annual Companies' Guide, in addition to a monthly newsletter and statistical bulletin. All documents are in both Arabic and English.

The Department is responsible for the new ASE web site and staff is in need of training on this subject.

Recommendations:

o. All public relations and marketing functions be entrusted to a new Marketing Department.

p. A pricing system for published material (on paper and CD) be formulated in conjunction to a pricing strategy for ASE web site use.

q. The Department may required IT support in terms of publishing programs and improving the quality of published documents.

vii. Trading Department:

The Administrative Regulations of the ASE describe the responsibilities of the Trading Department as:

- following up on and implementing the relevant regulations concerning trading;
- analyzing the conditions of the ASE and suggesting solutions concerning trading problems;
- providing supervision and surveillance for trading activities on a continuous basis;
- addressing brokers' inquiries;
- making sure that information flows to brokers; and,
- preparing daily trading bulletins.

The Department has a staff of five and coordinates closely with the Assistant CEO. Surveillance is an important part of daily tasks and has two dedicated staff members.

Recommendations:

r. That more training on surveillance be conducted.

viii. Members & Listings Department:

The Administrative Regulations of the ASE describe the responsibilities of the Members & Listed Companies Department as:

- preparing the necessary requirements and needed documents and forms for members to be able to join the ASE;
- conducting the necessary tests to license brokers;
- making sure that members constantly abide by the relevant laws and regulations; and,

- following up and verifying information provided by issuers of securities, according to the relevant listing regulations, and updating such information.

The Department has two staff members.

Recommendations:

s. The Department needs more authority to follow up on disclosure matters. As the rules stand now, the ASE cannot request any documents from listed companies and is not even officially notified of meeting of the general assemblies.

t. A database is needed to automate information on listed companies.

u. The Department should closely coordinate with the new Marketing Department on formulating a membership and listings strategy.

ix. Marketing Department:

(Please see "Clients").

Recommendations:

- A new Marketing Department to be created.
- Its responsibilities to include marketing ASE products and services in terms of listings, membership, and information dissemination.
- The Department is to handle all public relations functions.

x. Legal Department:

The Administrative Regulations of the ASE describe the responsibilities of the Legal Department as:

- providing legal council to all other departments concerning outgoing correspondence;

- reviewing all contracts that the ASE enters into; and,

- conducting off-floor trades (i.e. family and inheritance).

The Department has one full-time lawyer.

xi. Finance & Administration Department:
Internal Audit Department:

The Administrative Regulations of the ASE describe the responsibilities of the Internal Audit Department as:

- conducting internal audits on all departments concerning financial and administrative matters; and,

- following up on such audits to insure compliance with the relevant ASE regulations.

The Administrative Regulations of the ASE describe the functions of the Finance & Administration Department as:

- following up employee affairs;

- training of employees;

- accounting;

- preparing the annual budget;

- procurement;

- supervising procurements; and,

- public relations.

The Internal Audit Department has one staff member (Acting Head of Department) while the Finance & Administration Department has four including the Acting Head.

Recommendations:

- That the Internal Audit Department be merged into the Finance & Administration Department.
- That an outside auditor be appointed to review the ASE annual financial statements (a step on the road to corporatization).
- A new structure within the Department be created whereby, in addition to the Head of Department, two Assistant Heads be appointed; Auditing and Administration.
- The development of an MIS system that would assist the Department in automating daily calculations of fees and commissions, accounting and bookkeeping.
- Public relations functions be assigned to the new Marketing Department.

c. General Recommendations:

i. All heads of departments need to be officially appointed as
3. such.

ii. Job descriptions need to be drawn up for staff members.

iii. An IT and equipment needs assessment report should be formulated.

iv. A staffing needs assessment report should be formulated.

v. Each department should have clear administrative procedures.

vi. Information flows between departments and lines of cooperation need to be officially formulated.

vii. Performance monitoring procedures need to be drawn up along with performance goals for each department.

VII. OWNERSHIP AND MEMBERSHIP

1. Demutualization

Historically, exchanges have been organized as "mutual" associations. A mutual organizational structure means that usually the association is operated by members, who are typically brokers and dealers. In some cases, the exchange was government owned; in others, it was a corporate entity owned by its members. In both cases, **state control tended to play a role**.

The mutual structure was appropriate for a floor-based exchange which had space limitations. Memberships, or floor seats, where sold to members who themselves operated the exchange. Hence, exchange members enjoyed a barrier to entry and became *de facto* intermediaries for all who wanted to trade on the exchange.

Once automation began to spread, no technological barrier to providing "virtual" and unlimited access to an automated exchange was relevant. As a result, the logical reason for having exchanges organized as mutual association became much less relevant and other factors started pushing towards the "corporatization" of exchanges. Additionally, competitive dynamics in the market for trading services created by automation pushed this trend forward.

Demutualization of an exchange, which is the separation of ownership from membership from operation, is made easier by automation. And although vested interests usually resist this, demutualization is being adopted by many exchanges worldwide, augmenting a trend towards having **exchanges behave as for-profit public shareholding corporations.**

In a demutualized setting, tension is bound to rise between exchange members and owners. Members will resist the introduction of innovations that will cut their intermediation monopoly, even if such innovations will lead to the increase in the value of the exchange, benefiting exchange owners.

One way of dealing with this has been to **allocate, through different mechanisms, exchange shares to members so that the decline in their brokerage fees may be offset by increases in the value of the shares they own in the exchange.**

Share allocation can be pursued in more ways than one. Recent examples include exchanges that applied a 60-40 split between members and listed companies; 50

percent to members while auctioning off the rest to both listed companies and institutional investors; or, allocating all shares to members but listing them on the exchange itself the day following the demutualization.

Perhaps the most telling example of the **positive effects of demutualization** is that of Stockholm. Shares became freely tradable in 1994 and were listed on the exchange itself in 1998. The Exchange was the first to offer remote cross-border membership and direct electronic access to institutional investors, notionally executed via a "sponsoring" member, following its demutualization. As a result, turnover quadrupled in the first two years since demutualization and the Exchange's share price increased sevenfold.

2. Ownership Versus Membership

The issue of who owns the ASE is not a clear one. The ASE is defined as a public entity that is managed by the private sector. As such, it is **owned be the Government.**

However, **members have unlimited liability to cover ASE losses**. Such transfers are to be treated as loans to be repaid back to members from future ASE retained earnings. Additionally, the ASE received cash and in-kind contributions from the breakup of the former AFM.

This cash contribution was substantial and came close to JD1.2 million as it includes the **fees of both the ASE and members from the privatization and sale of Jordan Cement shares.** It was agreed that members would not take their commission for this sale and would, instead, consider it a contribution towards establishing the ASE. However, **members did not receive any shares in the ASE** for this.

3. Corporatization

It is recommended that the **ASE proceed with steps to corporatize itself** with the aim of achieving demutualization and **becoming a public shareholding company.** Steps to be taken in this regard include **deciding on a shareholding allocation process with clear control and voting powers.**

Owners' contribution in developing the ASE could then be defined along the various levels of commitment. Experience in the trading services industry and awareness of the risks inherent in it will enable owners to assist the ASE in making strategic, commercial, and financial decisions. For those who will play such a role, the following information should be provided:

a. Brief history since establishment.

b. Legal form of establishment, shareholder structure and corporate governance.

c. Internal organization and recent evolution.

d. Names of main banks and main clients for possible references.

e. Audited financial statements for the last three years.

VIII. PRICING

1. Prices for ASE Products and Services

ASE fees are modifications to those adopted by the old AFM. The current fee structure is as follows:

a. Listing Fees:

i. Shares and Investment Units:

The amount of 0.0004 of the listed value of each issue is assessed with an upper limit of JD3000 per listing.

ii. Private Sector Bonds:

The amount of 0.0002 of the listed value of each issue is assessed with an upper limit of JD2000 per listing.

iii. Public Sector Bonds:

A flat fee of JD250 is assessed per listing.

b. Trading Fees:

i. Shares and Investment Units:

The amount of 0.0006 of the value of each transaction is assessed on both the buyer and seller sides.

ii. Bonds:

The amount of 0.0001 of the value of each transaction is assessed on both the buyer and seller sides.

iii. Off-Floor Trades:

The amount of 0.001 of the value of each transaction is assessed on shares and 0.0001 on bonds.

c. Information Dissemination Fees:

These fees are negotiated separately with each vendor. So far, the following applies:

i. IFC:

As the local correspondent for the IFC, the ASE receives JD5,600 per year.

ii. Arab Monetary Fund:

JD2,100 per year.

iii. Local Vendors:

An agreement with Access gives the ASE 15% of the total revenues of this Jordanian company. The contract is scheduled to expire on June 27, 2001.

iv. International Vendors:

So far, Reuters is the only such vendor. The ASE receives $5 per month for each subscriber effective July 2000.

2. ASE Pricing Strategy

Publicly owned entities tend to cross-subsidize the products and services they offer. This often results in prices charged being above marginal costs for some products and services and below marginal costs for others. "Distributive" reasons are the usual justification for this. Good examples of this practice include government-owned electric and telephone service providers.

Generally speaking, exchanges have tended to cross-subsidize in three ways:

a. cross-subsidizing large trades by small ones;

b. cross-subsidizing on-exchange trades by off-exchange trades; and,

c. cross-subsidizing retail trades by institutional trades.

Dealer markets, which rely on market makers, are subsidized markets, where large trades are typically subsidized by small ones. The requirement that market makers offer firm bid and ask prices for a minimum number of shares for the stocks they are assigned is compensated for by, among other things, restrictions on public limit order display. This allows dealers to maintain privileged access to order flow information. Sometimes this is augmented by mandated delays in trade publication if the market maker is dealing as principal.

As for the cross-subsidization of on-exchange by off-exchange trades, recent studies indicate that **a main goal of new automated trading systems is to have in place a more efficient handling of large transactions**. This would avoid rules obligating block traders away from the floor.

An example of cross-subsidization of retail trades by institutional ones is Nasdaq's Small Order Execution System, or SOES. SOES allows small orders of one thousand shares or less to be transacted electronically against market-maker bid and ask prices ensuring that retail investors achieve timely execution. However, traders have been able to breakdown large order by sending continuous small orders, each for one thousand shares, to market-makers before the latter had a chance to adjust their prices according to information or trading activity.

Recent literature on the dynamics of exchanges suggests that **automation is rendering cross-subsidization ineffective**. This is particularly relevant as the market for exchange services becomes competitive. In such competitive markets, cross-subsidization leads to the entry of other competitors into the subsidizing part of the business; the part whose products and services are priced above marginal cost. New competitors also avoid the subsidized parts of the business, aided in this by advances in technology. Competitive pressures cause prices to decrease, rendering the subsidizing part unable to continue carrying the weight of unprofitable activities. All this points in the direction of **an increasing lack of sustainability of any cross subsidies as trading services offered by national exchanges will have to increasingly compete in regional and international markets** (Please see "Competitors").

The **ASE's market structure does not allow for market makers**. Additionally, off-floor trades are currently limited to inheritance and family transfers, which are not large enough to allow for cross-subsidization of any kind. **Block trades are**

allowed but end up paying the same fees as regular trades. Retail traders do not have any advantages over institutional ones.

However, **a need exists to view the pricing structure for each type of the securities traded and listed on the ASE. Public sector fixed income instruments are favored at the expense of private sector ones**.

3. Recommendations

Recent developments have indicated that **trading of certain financial instruments within regional markets can gravitate towards exchanges within those markets that offer the most efficient and cost effective trading systems**. This is aided by the fact that **exchanges can and do adopt strategic pricing to compete for both customers and tradable financial instruments**.

Examples in this regard include the way Tradepoint discounted its fees by 75% of those charged by the London Stock Exchange to compete for the processing of pre-matched interdealer broker (IDB) trades in 1997 and the aggressive pricing by Matif of the 5 and 10 year UK government bond contracts at 40% less than what Liffe was charging.

It is **recommended that the ASE carry out pricing studies** to determine a new pricing structure that would enhance its competitive position. These studies would take into consideration marginal costs and regional, international, and virtual pricing structures and techniques for the relevant **securities in terms of trading, listing, and information dissemination** services offered. It would recommend a **pricing strategy that would help maintain and increase listings and trading volumes and maintain the ASE's margins.**

It is recommended that such an exercise be carried out soonest. It should include an assessment of the key price drivers at the ASE, cost of inputs, client sensitivity, and an evaluation of substitution products, taking into consideration recent regional and international exchange industry developments.

As a footnote, it could be said that price and cost comparisons between exchanges generally make sense when a client is purchasing similar services and that this is relevant since different markets are characterized by different types of trades. However, price and cost factors are important because some exchanges allow intermediaries to pass on a large portion of transaction costs paid by them to the clients.

IX. CLIENTS

1. The Market

a. Description of the market into which the ASE sells products and services:

The economies of the Middle East and North African ("MENA") region are, directly or indirectly, dependent on oil production and **1999** was no exception. Due to sluggish oil prices, **MENA economies experienced economic growth rates of around 2%.** The picture would have been gloomier had it not been for the recovery in **oil prices** during the second half of the year.

During past years, this oil dependency caused lower levels of economic growth and investment throughout the MENA region when compared to other parts of the developing world. **The average growth rate for MENA countries was around 3.6% during the 1990s compared to a 5.5% average for developing countries.**

This level of below average economic performance was reflected in the performance of national exchanges in the region. Jordan's economy was not divorced from its regional context. A closer look at the ASE reveals the following:

ASE Summary Statistics

	1996	*1997*	*1998*	*1999*	*2000**
Number of Listed Companies	132	139	150	152	157
Market Capitalization (JD billion)	3.46	3.86	4.15	4.14	3.99
Market Capitalization as a Percentage to GDP (%)	73	77	79	79	
Trading Value (JD million)	248	355	464	389	61
Turnover Ratio	17.7	23.1	18.6	17.9	2.8
ASE Index	153	169	170	167	159
P/E Ratio	13.5	14.7	16.3	14.3	13.4
P/BV Ratio	1.7	1.6	1.6	1.4	1.4
Dividend Yield (%)	2.5	2.3	2.4	2.9	3
Traded Government Development Bonds (JD million)	4.5	1.9	2.3	0.8	
Traded Corporate Bonds (JD million)	0.6	0.1	1.8	3.3	
Net Investment of Non-Jordanians (JD million)	8.5	57	124	15.5	
Percentage of Non-Jordanian Ownership of the Market Capitalization (%)	33	39	44	43	
Value of Primary Market Issues (JD million)	174	327	109	85	

**Until the end February 2000*

The ASE has some 750,000 shareholders out of a total population of about 5 million. The 80% or so rate of capitalization to GDP is among the highest for emerging markets and suggests a highly developed equity culture.

Non-Jordanian ownership has been steadily increasing from around 33% in 1996 to about 43% recently. However, non-Arab ownership is as little as 6% of total market capitalization.

There is a lack of long-term debt. Relatively little activity takes place in trading of fixed income instruments. The market value for traded fixed income instruments since 1996 is shown below:

Year	Traded Value (JD million)
1996	5.14
1997	2
1998	4.04
1999	4.1
2000	3.05 *(until end of February)*

However, the issuance of fixed income instruments shows a marked increase since 1996 as illustrated below:

Year	Value of Issues (JD, millions)
1996	19
1997	0
1998	61.5
1999	31.8
2000	10 *(until the end of February 2000)*

The top ten companies on the ASE by market capitalization constitute about 70% of total market capitalization, with the top five accounting for about 63%, and the top company amounting to about 41% of market capitaliztion.

Primary market issues of new companies in terms of value decreased from around JD111 million in 1996 to around JD2.2 million in 1999. For established companies, the value of primary market issues since 1996 is shown below:

Year	**Value of Issues (JD, million)**
1996	43.8
1997	238
1998	9.5
1999	51
2000	5.11 *(until end of February 2000)*

b. Level of market penetration, current and future:

The **ASE** is the only exchange in Jordan. It is also the **only entity that is authorized to undertake the trading of securities and financial instruments.** As such, it is **a monopoly sanctioned by law**. It goes without saying that the current level of ASE market penetration for tradable securities in Jordan is very high.

Should the ASE continue to enjoy such a monopolistic position, it is likely that it will continue to have such a high and almost complete penetration of the trading services market in Jordan.

However, once the market into which the ASE operates is redefined to that of a regional one, the picture changes. Measure that could be utilized to determine the ASE's share of the regional market for trading and listing services include the **ratio of ASE capitalization to regional capitalization** and the **ratio of ASE trading volume to regional trading volume.**

Such measures should be utilized in conducting and industry and competitive analysis for the ASE to assist it in formulating its competitive strategy (please see "Competitors").

c. Categorization of the market:

Trading stocks in Jordan dates back to the 1930 while trading bonds started during the 1960. The AFM was established in the mid-1970s. Hence, the Jordanian market for trading services is an established one, be it only for stocks and bonds.

d. Financing schemes:

The ASE does not extend financing to clients. However, it should be noted that **several listed firms consistently fail to pay their fees**. The ASE has shied away from suspending trading for such securities believing that such action would hurt investors more than it would punish defaulting firms.

Several points warrant attention is this regard:

i. **this type of cross-subsidy extended by the ASE to listed firms may eventually cast an element of doubt on the reliability of ASE projected cash flows**; and,

ii. the logic of investors will be hurt by suspending trading in such securities masks the fact the it is the **lack of institutionalization encouraged by such tolerance that is more harmful to investors** (e.g. such disregard to fulfilling payment obligations by listed firms could easily extend to other rules and regulations).

2. Identification of Target Markets

a. How the client base has been segmented?

The ASE has two main client categories:

i. Direct Clients:

These are the direct purchasers of the ASE's products. They include:

- **Issuers**, who pay fees to list. The ASE has 157 listed firms.
- **Intermediaries**, who pay fees to trade. The ASE has 34 broker/members.
- **Information vendors**, who pay fees to be able to disseminate information. The ASE has an agreement with Reuters and Access, a local company. Additionally, it provides information to the IFC and the Arab Monetary Fund.

ii. Indirect Clients:

These are all the clients who execute trades through intermediaries on an the ASE and include:

- **institutional investors**;

- **single customers** (both physical and juridical); and,
- **other intermediaries not allowed direct access**.

However, it should be noted that, overtime, some of the indirect customers may evolve into direct ones.

b. The scope of the market and expected strength

i. Trading:

It is expected that the average **annual trading volume will increase from its current JD400 million to around JD1 billion by 2004/2005**. This is expected to take place as a result of the implementation of electronic trading, along with other steps being taken to develop capital markets such as the implementation of electronic clearance and settlement, streamlining the listing criteria, growth of the fixed income market, growth of the mutual funds industry, and linking the privatization process to capital markets. Additionally, Jordan's ability to achieve above average rates of sustainable economic growth will add momentum to this trend. (Issues pertaining to members have been addressed in other parts of this Business Plan).

ii. Listing:

The ASE is in the process of restructuring its markets with new listing requirements and procedures being drafted. Basically, **the new structure will split the Secondary Market into three: the First, Second, and Third Market. Each market has different listing requirements with the Third akin to an OTC board.**

The draft regulations also ease the listing of investment units of local and foreign mutual funds.

Special attention is being paid to the **privatization of process**. Under the new listing rules, the ASE Board of Directors has the authority to list public shareholding companies that come into existence via privatization in the First or Second Markets. The same holds true for certain private companies that go public.

The draft regulations allow for a transition period for companies currently listed on the Regular Market to adjust to the requirements of the First Market.

Currently, there are 157 listed companies. The ASE has further identified **some 30 public shareholding companies that are not listed** but that are good candidates to doing so. It is in the process of engaging those firms with the aim of getting them to list shares.

However, it should be noted that these companies **have the best of both worlds**. By being public shareholding companies, they are **able to tap into a wide equity investor pool and issue bonds**. By not being listed, they have **avoided the control mechanism that markets exercise on traded companies** by constantly adjusting share prices to reflect, partly at least, management decisions. Hence, it is difficult to see why such firms would consider listing unless an exit strategy is needed by some of the founders. And if this were the case, it would contradict logic inherent in IPOs whereby founders are usually required to remain in the newly listed company and are only allowed a phased out exit over a number of years.

It is recommended that the **ASE formulate a competitive strategy that includes a marketing plan**. The marketing plan should have a section dedicated to addressing listing issues. Among such issues to be dealt with are anomalies in current rules and regulations pertaining to listing. In this regard, two recommendations should be considered:

- **changing the law to require any public shareholding company to list its shares**; and,

- **providing incentives for private companies to consider going public and listing** their shares. These may include such steps as **providing corporate income tax reductions for listing a minimum percentage of shares**.

It is estimated that between 10 to 15 private companies are currently ripe for going public in Jordan.

iii. Investors:

The Jordanian Government lifted an earlier limit of 50% on foreign ownership of all listed companies except those active in mining, construction, and commercial services.

International institutional investors such as mutual funds, pension funds, insurance companies, non-pension bank trust, and foundations/endowments are usually impacted by **four main factors in determining how much to invest in a developing country/emerging market**:

First, **the supply of new securities** into that market.

Second, the **potential returns** in that market, which, in turn, depend on the performance of the particular exchange and its covariance with other markets (i.e. the less covariance, the higher the opportunity for diversification).

Third, **regulatory and tax issues**. Special emphasis is always placed on the legal basis for the enforcement of contractual obligations (e.g. clearance and settlement, and market efficiency issues).

And *fourth*, **disclosure and accounting standards**.

Institutional investors can invest via regional funds or, as the market liberalizes, they may shift to direct portfolio investing as they are doing in developed countries.

Some of the foreign funds/investors already active on the ASE are:

- IFC
- Foreign & Colonial (USA)
- Financiere Lafarge (France)
- Globex International Establishment (Germany)
- Barclays Global Investor (USA)
- Bankers Trust (USA)
- Unicorn Investment International (Mauritius)
- The Bank of New York (USA)
- Scudder Global Opportunities (USA)
- Scudder Emerging Markets Growth Fund (USA)

- Arab Gateway Fund (UK)
- Blakeney Management (UK)
- Templeton Developing Markets Trust (USA)
- Palestine Development and Investment Company.

Some of the banks listed may be acting as custodians to other investment funds. Major custodians at the ASE include HSBC, Arab Bank, and CitiBank.

c. Export plans :

Exporting in this context can take two shapes: **exporting the ASE's bundle of trading services, and exporting listed firms' securities**.

The Securities Law No. 23 for the year 1997 defines securities as follows:

i. transferable and tradable companies shares;

ii. various bonds including equity-option ones;

iii. certificates of deposit;

iv. mutual funds' investment units;

v. spot and forward contracts;

vi. options;

vii. other internationally recognized securities.

As recommended in other parts of this Business Plan, the ASE can expand the types of securities allowed to trade over it. For example, it could **specialize in the trading of municipal bonds, Jordanian and Middle Eastern**. Given the massive infrastructure financing needs of the region and the large budget deficits faced by many Arab governments, this type of instrument is expected to grow rapidly. The fact that credit rating agencies have begun to target the region of late paves part of the way for this practice.

New draft regulations facilitate **listing outside Jordan of securities issued by Jordanian companies**. It is **recommended that the ASE undertake an exercise to analyze the dynamics of this process** and study its impact on ASE trading volumes.

3. Market Share and Sales Volume

a. Recent Market Trends:

For the ASE, **1999** was not an exciting year. **Turnover was around JD40 million per month with losses to the index**.

A stock market is as good as what is being traded on it. The continued dependency of many Jordanian companies on the Iraqi market with little efforts geared towards accessing new export markets reduced profits and damaged share prices. Additionally, high domestic interest rates led to few new investments.

The implementation of the **privatization process did little to support the ASE**. The divestiture by the Jordanian Government of 9 million shares in The Housing Bank went to another government institution, the Social Security Corporation. Additionally, the sale of part of Jordan Telecommunications Company did not go through the ASE and the anticipated sale of part of Royal Jordanian does not seem to be moving in that direction either.

The peace process remains slow and this had a negative impact on ASE trading volumes. The emergence of the Palestinian stock exchange along with other **regional exchanges as viable marketplaces is diverting funds away from the ASE.**

(Please see “The Market”).

b. Anticipated Future Developments:

Forecasts for long-term growth for the MENA region are between 3.7% per year with the diversified exporters growing at annual rates of 4.6%.

Jordan should continue to experience improvements in the privatization process, new projects in minerals and infrastructure, and a lowering of fiscal deficits and public debt levels. Improvements in the peace process are also expected. In addition to minerals, certain sectors are slated for growth. These include tourism, pharmaceuticals and IT.

However, **competition between Middle Eastern exchanges for listing and trading services is expected to go hand-in-hand with attempts at various levels of cooperation.** It is expected that the **region's stock markets will start competing for the listing and trading of Arab blue chips soon.**

And it remains to be seen **how issues of primary concern to international investors, such as the lack of liquidity, are to be addressed outside the context of regional solutions.**

c. Estimate of market share and sales volume achievable over the next five years given the market trends described above and clients already secured:

For listing services, the **Jordanian banking sector is expected to experience consolidation** with the number of banks coming down from its current 19 to about 12 in 2004. Banks are also expected to resort, more and more, to **issuing bonds** with the number of listed issues expected to increase from 1 currently to about 6 in 2004.

The listing of investment units of **mutual funds** is also slated for growth. The number of listed investment funds is expected to grow from 1 fund currently to around 14 by the year 2004. Likewise, **the average value per listed fund is expected to grow** from an estimated JD100,000 this year to around JD3.2 million in 2004.

Total fees for listing services to the banking and finance sector are expected to increase from its current JD55,000 to around JD66,000 in 2004.

The insurance sector is also expected to experience consolidation with the number of listed firms declining from its current 24 to around 14 in 2004. **The average size of listed capital per firm is expected to increase** from its current JD2.625 million to around JD7 million. Insurance firms are also **expected to increase their issuance of bonds** from zero this year to around 5 by 2004 with an average value per listed issue around JD3 million.

Total listing fees for the insurance sector are expected to increase from its current JD25,000 to around JD42,000 in 2004.

The industrial sector is expected to experience growth in the number listed companies from its current 76 to around 128 in 2004 along with **increases in the average size of listed capital per company**. Additionally**, industrial companies' use of bonds is also expected to increase** with the number of listed issues jumping from its current 3 to around 20 in 2004. The total value of listed bond issues for this sector is expected to increase from its current JD35.6 million to around JD74.3 million for the same period.

Total listing fees for the industrial sector are expected to increase from its current JD146,000 to around JD384,000 in 2004.

As for the services sector, the number of listed companies is expected to grow from its current 43 to around 73 in 2004. **Listed bond issues are also expected to grow** from 1 today to around 15 for the same period with the total value of listed bond issues increasing from its current JD10 million to around JD55 million in 2004.

Total listing fees for the services sector are expected to increase from its current JD83,000 to around JD223,000 in 2004.

Growth rates of public sector bonds remain difficult to gauge. The Government is taking concrete steps to securitize its debt. However, when the full effect of such measures will be felt is an open question. Additionally, the fact that **no new development bonds** will be issued complicates number and size projections.

It is **estimated that the number of Government-listed issues will grow** to reach around 15 issues in 2004. Additionally, **municipality bond issues** are expected to reach 3 in 2004 and **bonds issued by state-owned enterprises** are estimated to be around 4 in 2004.

Trading volume in shares (excluding off-floor transfers) in expected to almost double from its current JD400 million to around JD842 million in 2004. Likewise, **trading volumes in bonds** are expected to reach JD8.5 million for the same period from its current JD4 million.

Trading fees are expected to increase from their current levels of around JD526,000 to around JD1 million in 2004

Fees from various information dissemination activities are expected to increase from its current JD28,700 to around JD228,151 in 2004.

Members are slated to increase from their current number of 34 to around 68 in 2004 with annual fees increasing from JD17,500 to around JD41,327 for the same period. One-time joining fees are JD200,000 per new member.

4. Marketing and Distribution

It is recommended that the ASE formulate a **marketing plan**. The marketing plan should include the **creation of a Marketing Department** along with dedicated staff. The head of the Department should be well versed in the current functions and future plans of the ASE.

The central goal of the Marketing Department would be **to market ASE products and services to local, regional, and international clients**. In this capacity, the Marketing Department markets existing products and gauges market potential for new ones. The Department is to give feedback to ASE senior management derived from client response to current and proposed products.

A detailed procedure that includes marketing steps on how to approach which clients with what products needs to be devised. An **advertising campaign** should be part and parcel of the Department's function and should be linked to other efforts underway or contemplated to promote the ASE such as public awareness campaigns.

The motivation of the Department's staff can best be assured the further the ASE moves from a public sector culture to a corporate one. Hence, it is recommended that the ASE marketing strategy include a **profit sharing plan for all ASE employees.**

X. ALLIES

1. Domestically

The **financial system in any country should be viewed as one entity**; trying to fix one part without addressing the faults of the other parts will not be a very useful effort. The financial system includes the monetary system, the banking system, capital markets, and, most importantly, the public finance system.

An efficient exchange has positive effects on the economy by facilitating the increase of savings and helping expand production and employment. Hence, **inefficiencies in any part of the exchange production cycle will impact society as a whole**. For example, low quality information leads to wrong prices, which results in a bad allocation of resources. It could even be said that problems in the banking sector may come to be as a result of the unbalanced capital structures of corporations resulting out of failures to develop adequate equity markets.

a. The Public Sector:

The **relationship between the success of an exchange and the fiscal practices pursed by its host government** is an intricate one. Experts point out that **stocks and bonds tend to deliver better long-term returns once government fiscal policies are on solid ground**.

In a previous report, USAID/AMIR consultants addressed some of the problems related to public finances in Jordan and their impact on the emergence of an effective ASE.

b. Intermediaries:

Specific emphasis should be placed on the **relationship between the existence of an active exchange and the future business of intermediaries**, especially **banks**. Two competing perceptions are at play.

The first perception states that an active exchange may result in increased competition for the business of financial intermediaries, especially commercial banks, in providing finance. This stems out of a belief that debt and equity finance are substitutes. The argument goes that as a stock market develops, the cost of equity decreases and corporations switch from debt to equity financing.

The second perception states that **debt and equity complement each other**. An active exchange enables the owner of a company to diversify risk by transferring some of the equity to other shareholders. As a result, the company would be able to also increase it borrowing. Additionally, from a lender's point of view, an active exchange would allow it to increase lending to companies since such a market leads to the improvement in information quality available to lenders.

Studies of company capital structures in emerging markets have found a positive and very significant correlation between company leverage and the extent of the host country's stock market development. This means that **an active stock market actually increases the volume of business for financial intermediaries, including banks**.

This is particularly relevant to countries whose exchanges have a low level of development. As the size and liquidity of their stock markets increase, the debt-to-equity ratio also increases. Recent literature indicates that in such markets, companies tend to issue new equity and borrow in amounts larger than the equity raised. However, as stock markets continue to develop, the debt-to-equity ratio declines.

And although, historically, a "division of labor" existed with banks providing short-term funding and securities markets providing long-term funding, this distinction is less clear these days.

c. Other:

An **exchange is thought of as producing a special good that benefits several stakeholders** such as intermediaries, issuers, institutional investors, private investors, and the citizenry of a country. Hence, a professionally run ASE will have several positive effects on the development of Jordan's capital market. These include:

i. impacting the **development of a professionally run private sector financial market** according to internationally recognized standards of conduct;

ii. contributing to the **emergence of a strong network of financial advisers and managers**;

iii. **assisting growth-oriented companies to obtain expansion capital** enabling them to become regionally competitive enterprises;

iv. facilitating the **formation of various types of investment funds**;

v. helping the **development of long-term capital sources**;

vi. contributing to **business restructuring efforts**; and,

vii. facilitating the **increase of foreign investments** in the Jordanian economy.

The **ASE should identify the various stakeholders for each**, draw plans to explain areas of mutual interests, and **assure current and future support** and engagement.

2. Regionally and Internationally

As **investors worldwide start to increase their international portfolios**, various types **of intermediaries are expanding the geographic scope** of the services they offer to such investors.

Along with technology, this has increased the **cost advantage of operating a cross-border trading system over multiple incompatible national exchanges**. It is also leading to the formation of **cross-border trading networks** of traders and products. As a result, it is widely believed that **failure to join such networks will cause the domestic exchange to be gradually abandoned** by traders and investors.

As mentioned elsewhere in this Business Plan, **an exchange can be viewed as a an economic network**. As such, **economic networks value compatibility, complementarity, and coordination**. Additionally, the **network nature of the exchange industry favors first movers in building competitive advantages**.

Basically, there are four ways in which exchanges have been responding to such competitive pressures:

a. Strategic Alliances:

A strategic alliance or joint venture between two or more exchanges can start by having **one exchange adopt the other's trading technology or clearing system.**

b. Common Access Systems:

Common access systems take the strategic alliance a step further by allowing for the **creation of a common electronic system to access several exchanges.**

c. Common Trading Systems:

A common trading system for several exchanges strengthens the relationship even more.

d. Mergers:

In all the previous variations, the participating exchanges remain separate legal entities. Known sometimes as "implicit mergers," such variations involve an agreement between two or more exchanges that securities listed on one exchange are also listed on the other and that members in each exchange are allowed remote access into the other. However, this is not the case in an outright merger whereby a single exchange is the result.

Recently, Europe is witnessing various efforts by exchanges to form alliances or merge in an effort to implement a **common market** model **with a single, electronic interface** and harmonized 24-hour trading.

XI. REGIONAL AND INTERNATIONAL COMPETITION

1. Background

For any business, maintaining the *status quo* can be detrimental. Even for the strongest of brands, competition finally finds its way as human initiative is restless. Hence, **the battle to gain and maintain customers must be fought and won every day.**

However, **change is difficult to implement in cases where an institution started out as a success story but then lost ground to other players**, as is the case with the ASE. Introducing new products, processes, or technology is usually resisted by vested interests. But for the **ASE** to survive, it has to embrace change and concentrate on **developing itself as a regional brand** as it strives to better service its customers.

How the exchange industry will evolve, regionally and internationally, in the coming years is a difficult question to answer. What is clear is that **advances in automated trading have changed the competitive structure of the trading industry**. This has caused recent exchange literature to start viewing **exchanges as firms operating in competitive regional and international environments**, and not as just static repositories of rules governing the transfer of ownership of securities.

These "firms/exchanges" are basically offering trading services via different technologies, under varying trading rules, utilizing several trading systems.

Indeed, **increased connectivity offers the flexibility to design new markets or displace older ones**. As such, **traders are customers of trading services that are offered by exchanges/firms in bundles**. These bundles have explicit and implicit trading costs, and liquidity effects, embedded in them. Prices are produced through the interaction between these bundles and the behavior of traders.

Competition between exchanges is a recent development. Exchanges were perceived as public entities or heavily regulated private entities. In either case, the exchange was a legal monopoly. Justification for this had much to do with the fact that exchanges produce quasi-public goods and services.

In addition to technological advances, new financial instruments, the decreasing role of banks as a primary source of funds to borrowers, and an increasing financial awareness on the part of common folk helped increase competition between exchanges on the one hand, and between exchanges and automated trading systems, on the other.

Increased competition resulted in various types of mergers, technological agreements, price wars, takeovers, and the emergence of new exchanges. Additionally, exchanges began changing their ownership structure. This form of privatization entailed the separation of ownership, membership and operation. As a result, the corporatization of exchanges started taking place.

2. Who are they?

Although **more than 60 new financial exchanges have been created worldwide since 1990,** about **half the countries of the world are without national exchanges**. However, **just as there is no need for each country to have a national airline, there is no need for each country to have a national exchange**; both could end up being a burden on the taxpayer and the treasury. Furthermore**, as financial markets become increasingly integrated, the welfare of national firms and intermediaries depend less on the state of affairs of the national exchange.**

a. Regional:

Will Middle Eastern exchanges merge? **Is there enough business for all** of them to flourish? Will **price wars** start between them to attract more listings and trading volumes? Will **new types of strategic alliances** find their way into the region? **Can one exchange decide unilaterally to trade shares listed on other exchanges**?

The ASE and the environment within which it operates share many of the characteristics common to MENA exchanges and economies. The fact that the ASE, and the rest of the MENA exchanges, remained unaffected during the recent Russian and Asian crises is a blessing and a curse. If anything, this indicated to many that **most of the MENA exchanges were off the radar screens as far as international portfolio investors were**

concerned. The region was also bypassed when such investors returned to emerging markets later on.

However, 1999 was marked by a **drive on the part of MENA exchanges to increase their appeal to international investors**. Many exchanges undertook heavy investments to **upgrade their microstructure**. In addition to the ASE, the Bahrain Stock Exchange, the Cairo & Alexandria Stock Exchanges, the Dubai Financial Market, the Doha Securities Market, the Muscat Securities Market and Saudi Arabia can all point to efforts in this regard.

The installation of **automated trading systems**, **upgrading back office operations**, and implementation of **Wide Area Networks** that would enable traders to access markets from outside the exchange are examples of efforts that continue along with steps to **enhance data dissemination** and the provision of on-line information. The use of the Internet in this regard is on the increase.

Many exchanges have also improved **disclosure and reporting standards** and are **improving regulatory structures** and **corporate governance**. **Foreign ownership restrictions** are being eased and **measures to increase market liquidity** are being pursued.

There are signs that such efforts are beginning to bear fruit. The addition of Bahrain, Lebanon, and Oman to the IFC's index series and the anticipated inclusion of Egypt in the MSCI Emerging Markets index should help focus attention of these markets. However, the region still has a long way to go.

Arab stock markets account for about 6.5% of total market capitalization of the 38 emerging markets in Asia, Latin America, Africa and Eastern Europe. They **also account for about 0.6% of worldwide stock market capitalization**. Total capitalization for the 12 Arab stock markets at the end of 1999 was about $185 billion. In comparison, the Israeli stock market with 670 companies listed enjoys a capitalization of about $75 billion, with 78 Israeli firms listed on Nasdaq capitalized at $70 billion.

A regional comparison may help shed some light on where the ASE stands in terms of performance, market capitalization, and turnover. The table below is illustrative:

	Index on			Market cap ($ billion)			Turnover ($ billion)		
	Dec. 31 '98	'99	% change on year	Dec. 31	'98	% change '99		'98	'99
Jordan	170	167	(1.6)	5.8	5.78	(1)	0.65	0.55	(15.8)
Palestine	155	237	53	0.57	0.85	50	0.07	0.15	119
Lebanon	912	721	(21)	3.3	1.92	(42)	0.33	0.09	(73)
Bahrain	2188	2212	1	6.9	7.15	2.5	0.57	0.44	(23)
Kuwait	1582	1442	(9)	18.9	20.3	7.3	11	6	(45)
Oman	228	250	9.5	5.9	na	na	na	na	na
Qatar	135	134	(0.7)	5.7	5.5	(4.4)	na	na	na
UAE	3590	2949	(18)	na	na	na	na	na	na
Saudi Arabia	1413	2028	43	42.6	60.8	43	16.5	15.1	(8.7)
Egypt	382	624	63	na	13.6	na	na	9.7	na
Tunisia	464	811	75	2.3	2.7	16	0.19	0.44	132
Morocco	803	777	(3)	15.4	13.7	(11)	2.37	4.17	(32)
Totals									
Israel	299	487	62	41.8	59.7	43	14.9	21.1	42
Turkey	2598	15,209	485	34	116	239	70.4	83.8	19

Numbers are approximations

Full-fledged regional competition between established exchanges in the Middle East would greatly benefit from such things as a single currency and a multilateral investment legal structure. However, the increasing role of the US dollar and the WTO and Euro-Mediterranean agreements could go some ways in addressing such concerns. Additionally, the emergence of bilateral investment treaties is pointing the way towards a quasi common market for some goods and services.

As legal barriers to cross-border electronic trading are being removed throughout the world, it is not far fetched to imagine a day in the near future when Middle Eastern exchanges pursue the same path. This would **allow automated markets in the Middle East to achieve "virtual" expansion**, attracting foreign traders from inside and outside the region whose cost of access to the particular local exchange would have been higher otherwise.

However, it should be noted that because of the economic network nature of exchanges, even perfect competition is not enough to edge them out of inefficient ways of doing things; **conscious efforts at compatibility are a must.**

b. International:

Some of Jordan's biggest private and public sector companies have begun to break new ground by **issuing international bond and equity transactions**.

Investments in Jordan's IT sector, QIZs, and the Aqaba Special Economic Zone are expected to continue to be of a venture capital or private equity nature (i.e. direct investments). Exit strategies need a few years to mature and although **IPOs** are one option, they may not take place on the ASE but in more liquid and dynamic markets such as **Nasdaq or London. The ASE has to compete to garner the lion's share of such issues.**

c. Virtual:

Technological advances in automated trading have allowed for the rapid entry of **computerized exchanges as competitors to national exchanges** in what could be called a world market for exchange trading services. National or local exchanges that have hitherto enjoyed monopolistic or semi-monopolistic status are increasingly finding that their niche markets have suddenly become "contestable." This has been primarily driven by the lowering of sunk costs as barriers to entry and exit which has been a direct result of increased advances in technology.

About 25 years ago, it used to cost around $100 million to develop an automated trading system, for both hardware and software. Listings were fewer and turnovers lower compared to today's levels. Since floor-based systems already had liquidity features, the cost of adopting automated trading had to fall before such systems became attractive. The cost did drop, dramatically.

A good example is **Tradepoint, which was developed for around $10 million**, compared to the London Stock Exchange's Sets and Deutsche Borse's Xetra, each developed at a cost of around $100 million. It is estimated that with a further investment of around $5 million, Tradepoint could easily match the capacity for either system.

Examples of **trading gravitating towards electronic systems** and away from floor-based ones abound. In 1996, the German Bourse decided to allow both electronic and floor-based trading, allowing traders to choose between the two. Within two years, 92% of exchange trading gravitated to the electronic platform. Another example is the French Futures Exchange that wanted to test the viability of using an electronic trading system. It ran dual electronic and floor-based trading at the same time for one actively traded contract. In less than one month, all trading in that contract gravitated towards the electronic system.

Additionally, the definition of what an exchange is became more blurry with the development of **automated trading systems that provide trading but not listing services by trading securities listed on other exchanges**. **Aside from low development costs, such systems have an added advantage since they free ride on the fixed cost of the listing process undertaken by the regular exchange to offer trading services in shares listed on those exchanges**.

The **ASE should be prepared to compete with such a Middle Eastern virtual exchange should a group of investors decide to launch one in the near future**.

3. How to Compete?

a. Competing on Quality and Cost:

Exchanges compete on market quality and on the cost of their trading services. And although academic research in this regard has tended to focus on market quality issues, recent studies have called for focusing more on cost (Please see "Products and Services").

b. Competing for Listings:

Why would a firm list on an exchange other than its home one? In deciding where to list, *ceteris paribus*, **companies usually prefer exchanges with more intermediaries and more listed companies**. **More intermediaries provide for higher liquidity**. A higher number of intermediaries could generate more trading orders from investors and lead to **competition between intermediaries to lower commissions**. Recent exchange literature illustrates the **large impact liquidity has on the value of traded securities**.

A major exchange serves a larger group of investors and **has the mechanisms in place to make investors aware of what is listed on it**. This also leads to higher stock prices for the listed company.

Being listed on an exchange that enjoys many listed companies is also coveted since **the number of listed firms could be testimony to the good reputation of the exchange**. Such exchanges **function as a public relations move for the listed company**. They could also attract more intermediaries and investors.

c. Competing for Members:

As to intermediaries, they also **can select on which exchanges to trade**. Changes in regulations and advances in technology are enabling them to **function, more and more, as broker/dealers**. The **more financial products are listed on an exchange, the more attractive it is** for intermediaries **since this helps them achieve higher trading volumes and diversification for their own and their customers' portfolios**. Additionally, the more intermediaries there are on an exchange the more attractive it is to other intermediaries since **"liquidity attracts liquidity."**

4. ASE Competitive Strategy

One industry and competitive analysis model that could be utilized in understanding the dynamics of the **exchange** industry is that of **economic networks**. A basic assumption in this model is that of positive network externalities which basically means that **the benefit derived by a user increases**

as the number of other users increases; the more users are using the network or a compatible network, the more it becomes valuable to each single user. As such, **complementarity, compatibility, and coordination** are essential to the success of economic networks.

Exchanges could be viewed as incompatible networks. Recent exchange literature observes that advances in technology are increasing network externalities. This is leading to the emergence of various agreements among exchanges to achieve all sorts of cooperation agreements.

Typically in a network, the greater the number of customers, the greater the utility for everyone. Put differently, *ceteris paribus*, companies would prefer to list on exchanges that have more companies listed on them and where more intermediaries trade. Additionally, intermediaries prefer to trade on exchanges with more companies listed and with more intermediaries present.

As noted in this Business Plan, the exchange, or the trading services industry, is becoming increasingly competitive. Three main factors are propelling this trend forward:

a. the **decrease in trading system development costs** caused by technological advances in computer processing and the "commoditization" of the trading technology;

b. the **decline in the competitive advantages offered by geography** caused, in no small part, by the decline in the cost of constructing cross-border trading networks; and,

c. the **ability to custom-make automated trading systems**, at competitive costs, that would allow trading in a variety of securities and financial products.

In attempting to formulate a competitive strategy to address current and future industry dynamics, **the ASE should ask itself three questions:**

i. **Is it providing real value to its customers**?

ii. **Is the current *modus operandi* the most effective way of serving its customers**?

iii. **It the current *modus operandi* the best practice that could be realized at the present time, or is it a function of vested interest**?

By answering these questions, the ASE can start to formulate a competitive strategy that would enable it to hedge against various outcomes as the regional and international market for the provision of trading services evolves. **In addition to what is illustrated in this Business Plan, an ASE competitive strategy should pay attention to the following points:**

a. The ASE should conduct **an industry and competitive analysis on the regional trading services industry**. Competition between exchanges is difficult to analyze for many reasons. One such reason is that it is difficult to define the relevant markets within which exchanges compete. However, **whenever exchanges compete in standardized areas, only one will dominate**.

b. The ASE should concentrate on **extending its scope beyond the borders of Jordan**. Geography is less important because of the ongoing integration of financial markets, instruments and intermediaries.

c. The ASE should **focus on well-defined types of trading and traders**.

d. The ASE should **concentrate on profitable activities**. An exchange could be viewed as a company competing with others to produce the best price-quality-quantity combination.

e. The ASE, as a new player in electronic trading, should **take advantage of "open architecture" trading services systems, which substantially facilitate the integration of new trading systems** with existing information and support systems.

f. The **link between the ASE and Jordan's IT industry**.

g. The impact on the ASE of **Jordanian companies listing shares on other exchanges**.

h. **Today's international portfolio investors look for large markets, large currencies, and large companies**.

5. Anticipated Reactions to ASE Initiatives

Future behavior of current and potential competition depends on development costs, operating costs, and the direct cost of delivering exchange trading services to customers. However, it is reasonable to assume that **as the Middle East becomes more economically integrated, the more efficient exchanges will**

flourish while inefficient ones will increasingly become financially burdensome entities for their respective governments.

Several competitive strategies could be adopted by regional exchanges in response to initiatives undertaken by the ASE. Apart from **price wars, non-price competition includes:**

a. Process Improvements:

This includes **reforming exchange governance structure, trading systems, and surveillance procedures**. The goal **is to enhance the reputation and quality** associated with the **exchange in terms of the provision of immediacy, price discovery, low price volatility, liquidity, transparency, extending trading hours, etc**. Several regional exchanges have already begun implementing measures in several of these areas.

b. Traded Product Innovation:

This involves **allowing for trading of more than plain-vanilla shares and bonds** and could include such things as the trading of derivatives and others.

c. Implicit Mergers:

Recent literature emphasizes the need for coordination, otherwise exchanges could be locked into inefficient situations. **A number of regional exchanges could group in one bloc, or alliance, to improve cooperation in certain areas.**

Middle Eastern exchanges are operating with the same basic trading mechanism, the continuous electronic auction, with systems bought in several cases from the same western vendors. **Bilateral and multilateral investment treaties will increasingly allow for remote membership, either directly or indirectly via a hub-and-spokes model, facilitating cost-effective cross-border trading. Such developments are bound to lead to the creation of quasi-regional liquidity pools**. The fact that many Middle Eastern currencies are pegged to the US dollar alleviates some of the concerns associated with the lack of a single currency.

Among other things and depending on the cost structure, **specialization of exchanges could take place where one exchange could list firms while the other would take members and offer trading services**. Agreements could be put in place to arrange for various formulae to share revenues. Member of one exchange would be allowed to become members in the other.

Several Middle Eastern exchanges connected can form a regional or quasi-regional web. It is not difficult to envisage a situation not too far in the future whereby **certain exchanges will specialize in standardized products such as government bonds, derivatives, and stocks of blue-chip companies**.

d. Lock-In Strategies:

Although the information advantage enjoyed by national exchanges will almost always be relevant for small and mid-cap firms, exchanges may still opt for incompatibility and **attempt to lock-in their clients by enacting regulations that make it difficult for all types of companies to list elsewhere.** They may also **restrict members' ability to trade out of the exchange**.

And finally, it should be noted that if an exchange is an efficient monopoly with all costs being lower than other exchanges, it has little incentive to engage in talks with other exchanges regarding potential alliances.

a. LEGAL AND REGULATORY ISSUES

1. Background

Exchanges can be viewed as "meeting places" for investors and borrowers who want to invest funds in real productive assets, and savers and lenders who seek returns on their funds. The **users of funds are the issuers of securities**; the **providers of funds are the buyers of securities**.

Recent trends in the exchange industry have pointed towards liberalization and globalization in both developing and developed countries. Examples include emphasizing competition, deregulating commission rates, and allowing for the operation of foreign trading service providers. Regulatory frameworks are becoming more competitive as liberal policies replace government control and/or private arrangements.

Such trends have impacted the regulatory environment within which an exchange operates. Recent regulatory orientation has called for regulation to be confined to the areas needed to correct a real or potential securities market failure. The implications of such an orientation are:

- Allow the *market to set prices*, which depends on investors having access to reliable information. This calls for **standardized accounting procedures and disclosure requirements**.
- Allow for a *fair market*, which means that trading systems must be supervised to **prevent manipulation and insider trading**.
- ***Educate investors***. Although ideally a cooperative effort between public and private sector entities, governments are generally better equipped to educate investors about the risks and rewards of investing in a securities market.
- Restricting *access* to the trading services industry should concentrate on such parameters as **capital adequacy requirements and issues of professional competence**. There is little evidence that other entry barriers have generated benefits to an economy beyond increasing the profits of existing service providers.

- **Allow for *foreign ownership*** of shares. Markets can better develop if foreign investors are working hand-in-hand with domestic institutions. Additionally, should a government pursue the path of restricting foreign ownership, it should apply this to all companies regardless of whether they are listed or not.

- Participate in the ***international harmonizing* of regulatory environments**. This will augment a developing country's efforts to develop its capital market by linking them to international capital markets.

- A stock market is as good as what is being traded over it. The ***quality of traded issues* can be augmented by having in place adequate listing standards or objective guidelines for the various tiers such as minimum profits, revenues, assets or net worth along with sound corporate governance principles**.

Hence, **an effective regulatory environment can help produce an efficient capital market** and prevent market failure, a must for any developing country.

A securities market failure can generally stem from two sources: informational asymmetries and the risk of system collapse. Informational asymmetries are prevalent throughout markets. They tend to revolve around access to information and the ability to act on information. **Regulators should be concerned about information asymmetries because a lack of public confidence in an exchange would lead to a decrease in the supply of funds, negatively impacting the functioning of the market.**

As a result, disclosure requirements are important. However, it should be noted that **disclosure is not effective without adherence to efficient accounting standards**. Other measures include licensing requirements for various providers of financial services, individual or institutional, credible contract enforcement, and a transparent and fair pricing system.

The risk of **system collapse** would have serious negative consequences on the economy of a country or region because a securities market is closely linked with the rest of the financial system with spillover effects a strong possibility. This is particularly relevant as intermediaries fail to meet obligations to customers or to other market participants. **Measures to address such system collapse include such things as capital adequacy requirements and others to assure the safekeeping of customer's funds and securities**.

For developing countries attempting to improve their regulatory environments by incorporating initiatives from more developed countries, a point to keep in mind is that **in developed countries securities markets started as private responses to economic needs, whereas in developing countries securities markets have mostly been established by governments to serve economic development goals**. As a result, governments in developing countries have a more direct stake in the operations and, presumably, the success of national exchanges. This situation generates what is termed **"merit" regulation; regulatory authorities in developing countries tend to be more concerned with the outcome rather than the procedure.**

Merit regulation allows for government management of an exchange and calls for government involvement in such things as credit allocation, control of new issues, and restrictions on market access via non-transparent licensing requirements. Although a regulatory environment of this type restricts competition, it also tends to reduce risk.

The selection of an appropriate regulatory environment depends on:

a. *micro-level issues* related to the various facets of a market's organization, **such as the extent to which infrastructure needed to operate the exchange is in place**; and,

b. *macro-level issues*, **such as the types of financial service providers** (e.g. universal banks versus investment banks) and **the prevalence of sophisticated investors in the market.**

Securities market regulation can be imposed by the government via a securities commission, for example, or **it can be a self-regulatory exercise** with the market regulating itself **and the government's role restricted to oversight**; a method more prevalent in developed markets.

The concept of self-regulation tends to be less clearly defined in developing markets. **(Please see "Notes on Self-Regulation" in Appendices).**

Self-regulation accompanied by governmental oversight is being applied in more developed markets in three areas: new issues markets; secondary-trading markets including areas of surveillance and enforcement; and, regulating market participants.

More than one government agency may be involved. In some markets the involvement of the **central bank** becomes particularly important **if a country applies the concept of universal banking, allowing banks to undertake commercial banking activities in addition to investment banking**. In such cases, banks may be required to set up separate securities affiliates, or divisions within the bank, to undertake capital market activities. The aim of the regulator in this case is **to reduce the potential for transferring the risk of capital market activities** to depositors or to the government should there be an official or informal deposit insuring scheme or tradition.

2. Legal Basis

In **judging the efficiency of institutional and regulatory features of a securities market, the IFC uses seven indicators**. These are:

a. whether **listed firms publish comprehensive price-earnings information internationally**;

b. the **efficacy of accounting standards**;

c. the **quality of investor protection laws**;

d. the **presence of a securities and exchange commission**;

e. **restrictions on dividend repatriation** by foreign investors;

f. **restriction on capital repatriation** by foreign investors; and,

g. **restrictions on domestic investments** by foreigners.

Jordan's new **Securities Law was issued in May of 1997**. It effectively split the old Amman Financial Market into three separate and independent entities: the Jordan Securities Commission, the Amman Stock Exchange, and the Securities Depository Center. Pursuant to this, the ASE became a separate entity to be managed by the private sector with legal and financial autonomy.

Since then, the Country experienced several positive developments in terms of capital market regulations. These **include attempts at enhancing market transparency and applying International Accounting and Auditing Standards**. The ASE observes international standards of good practice and aims to apply the **G-30 recommendations to trading**.

Disclosure continues to receive special attention. Requirements include publishing semi-annual reports, pre-announcements, and prompt disclosure of material changes impacting securities prices and company profitability. However, **institutionalization of the publishing and disclosure process is still ongoing**.

Regulating information disclosure by listed companies remains the responsibility of the JSC as it is the entity responsible for issuing regulations aimed at creating an enabling environment to achieve a sound and transparent securities market in Jordan.

ASE internal by-laws issued in 1999 define the Exchange's tasks. These can be summarized as follows:

b. creating the necessary environment for sound and fair trading and price discovery;

c. providing the necessary linkups and connections;

d. monitor trading;

e. establishing a professional code of ethics;

f. disseminating information;

g. servicing members; and,

h. establishing cooperative relations with other exchanges.

ASE by-laws require that the Board of Directors put in place **dispute resolution procedures to address disputes between ASE members and between ASE members and their clients**. The ASE is moving on improving dispute settlement procedures.

Most restrictions of foreign capital investment and repatriation have been eased.

The ASE aims to maintain and increase the investing public's confidence. To this extent, the ASE issued the following regulations:

- a Code of Ethics that applies to the ASE and its members; and,
- Directives on Disclosure pertaining to the ASE only.

3. Subsidies

Since the ASE became an independent entity, administratively and financially, the JSC ceased the provision of any subsidies. A settlement was reached between the three entities, JSC, ASE, and SDC, as to the division of the old AFM assets. The French Government grant has been completely used. **The only current aid program benefiting the ASE is that of the United States Government through USAID/AMIR.**

4. Corporate Governance

Corporate governance issues are of concern in developing markets. It is recommended that the ASE continuously monitor and improve its corporate governance guidelines to have in place a set of sound business practices.

a. Relationship with Stakeholders:

ASE corporate guidelines should aim for the ASE to have a better understanding of the broad concerns of all stakeholders, including the JSC, SDC, members, investors, and listed firms.

b. Implementation and Procurement:

The ASE may implement directly or appoint contractors to implement in a timely manner and in a cost-effective way. Hence, procurement procedures should be revised to provide at all times:

i. A summary of the implementation arrangements including the names and agencies charged with implementing individual components of the ASE projects.

ii. The rationale for the choice of these agencies and a description of their track records.

iii. The nature of the contract with these agencies and any completion covenants, progress payments, progress schedules and performance bonds associated with the implementation of the projects.

iv. A detailed implementation and disbursement schedule.

v. The critical startup dates within the project/s timetable/s and how these dates will be realized, and any backup plans in the event of time delays in the startup.

c. Transparency:

The ASE has adopted a set of disclosure guidelines. However, the following additional information should be provided for procurement purposes:

- A justification of the proposed method for purchasing goods, services, and equipment.
- Confirmation that the goods, services and equipment have been purchased at arm's length on proper commercial terms.
- The nature of the contracts (e.g. turnkey).

5. Taxes

Currently, the ASE is exempt from all kinds of taxes including corporate income taxes.

6. Legal Environment

It is **recommended that the ASE undertake, with the assistance of outside experts, a full and comprehensive review of existing legislation, in the form of the Securities Law, Companies Law, and others, to ascertain how such legislation facilitate or hinder its current and future operations**.

Some of the points that warrant special attention include:

i. What is a Non-For-Profit?

Does being a non-profit preclude the making of profits or does it merely mean that a non-for-profit entity cannot distribute dividends?

It the answer is the latter, then the **ASE, its management and staff should be given every incentive to make the ASE a profitable entity** since its future survival and expansion relies on this.

j. Members' Liability for ASE Losses:

Rules and regulations state that **members are to be responsible for any and all losses incurred by the ASE.** Such losses are to be covered by members in equal shares, irrespective of their trading volumes. Such coverage is to be treated as a loan from members to the ASE and is to be repaid from future retained earnings.

The situation is complicated by the fact that **members are not the legal owners of the ASE**. Additionally, little incentives exist for ASE management and staff to reduce costs and increase revenues.

k. Brokers' Guarantee Fund:

The **relevance of such a fund as one is being put together at the SDC** to address clearance and settlement concerns between brokers.

l. Listing Requirements:

As described in this Business Plan, **the law does not obligate public shareholding companies to list.** As such, these companies have the best of two worlds: they are able to access a wide investor base while escaping the market control. Additionally, listing is usually associated with exit needs of founders.

m. Investments:

The **law seems to restrict the ASE's ability to invest retained earnings**. Clarifications in this regard are needed.

n. Streamlining of Authority:

The **ASE's powers to inspect and sanction brokers is** limited by the JSC's powers in this regard. The JSC is the entity that can sanction violating brokers. For example, any violations to the code of ethics cannot be sanctioned by the ASE; it can only recommend action to the JSC.

o. Dispute Resolution:

New procedures to resolve disputes between brokers and between brokers and clients are being formulated. The draft regulations call for the **appointment of an *ad hoc* arbitration rather than institutional**. As the draft stands, a committee of three arbitrators is formed; two chosen by the disputing parties and the third to be chosen by the selected two.

The way the draft stands **places too much emphasis on disputes pertaining to local trading and investors rather than foreign**. It may be worthwhile to **explore the viability of having in place a panel of experts from which the arbitrators can be chosen** with a classification for simple disputes (e.g. less than JD10,000).

XIII. FINANCIAL PROJECTIONS

1. Cost Elements

One of the most important analyses is that of inputs and costs. An accurate breakdown of the ASE costs and the use of funds is essential. However, allocating costs in the production process of an exchange is not easy because not **all costs contribute directly to the production of the exchange's products: listing, trading, and information dissemination services.**

Examples of such costs include:

- The costs of regulating and supervising an exchange. Efficient regulation and supervision makes for an attractive market for issuers and traders thereby increasing trading volumes and exchange revenues.
- Research and Development costs.
- Advertising costs.
- Discount costs that result out of charging below the actual cost of listing to guarantee higher trading volumes.

And although some of these costs may not be currently relevant in the case of the ASE, the premise helps in **viewing an exchange as one profit center**.

a. The most important inputs into the ASE production process:

i. Electronic Trading System:

The electronic trading system was obtained from the Paris Bourse and paid for out of a ten million French Franc grant to the Government of Jordan from the French Government.

ii. *Staff Compensation:*

Projected figures for this year put the costs at about JD333,000.

iii. *Board of Directors Compensation:*

Projected figures for this year put the costs at about JD53,000.

iv. *Training:*

Projected figures for this year put the costs at about JD30,000.

v. *Marketing:*

Projected figures for this year put the costs at about JD20,000.

vi. *Maintenance of the Trading System:*

The ASE is currently negotiating the maintenance and upgrade agreement with the French side. Projected figures for this year put the costs at about JD20,000 and JD50,000 for next year.

vii. *Maintenance of other Equipment:*

Projected figures for this year put the costs at about JD20,000.

viii. *Telecommunications & Electricity:*

Projected figures for this year put the costs at about JD36,000.

b. Where will inputs (equipment, material, etc.) be obtained from and how will their supply be secured?

As mentioned previously, the electronic trading system has already been procured via a French Government grant.

Staff is hired from the local market. However, it is recommended that the ASE pay competitive salaries to attract and retain some of the best local talent. Additionally, a profit sharing plan should be considered as described earlier in this Business Plan.

All other equipment can be procured locally via authorized vendors.

c. Payment terms:

For purchases of equipment, payments will be as per procurement procedures established at the ASE (please see "Corporate Governance"). Salaries are paid out on a monthly basis as are invoices of utilities.

d. Other sources of supply:

None are necessary at this time for the trading system.

All other inputs can be supplied from various local and foreign vendors.

e. Which inputs will be secured with hard currency?

Hard currency may be needed for the maintenance and upgrade of the trading system as well as part of the training and marketing expenses.

f. How the costs have been estimated?

For running costs, figures of 1999 have been taken as a base with appropriate rates of increase applied conservatively.

g. Supplier costs, engineering quotes, featured quotes, by whom, and the estimated degree of accuracy in these costs?

None were calculated at this time. However, future expansion plans will necessitate such details, especially upon moving the ASE to its new offices.

h. A timetable indicating when the new costs will be incurred:

Not available at this time. It is **recommended that the ASE undertake an exercise to map out upcoming expenses in light of its move to its new headquarters.**

i. The valuation methodology of in-kind contributions or of existing assets:

A kind of settlement was reached with the JSC regarding the part of the old AFM assets to be transferred to the ASE. Tangible assets were valued at book. A sharing of past income from information dissemination and trading took place.

Additionally, the ASE received its share of the Jordan Cement privatization deal in cash along with the share of the brokers. The latter amounted to JD285,000. The total amount that was allotted to the ASE as a result of this settlement was around JD1.2 million.

Information on the trading system is listed above.

The ASE will be receiving grants from the USAID/AMIR program.

j. An explanation of the cost contingency built into project costs, where the potential overruns might come from, and whether the ASE has ensured sufficient back-up funding in the event of cost overruns:

Contingency for this year is estimated at JD19,000 by the ASE Accounting Department. No particular methodology was employed in estimating it.

Potential overruns could come from maintenance and upgrading of the trading system. Once the maintenance and upgrade agreement with the French side has been finalized, an educated assumption can be made as to contingency numbers in this regard.

Projections in this Business Plan took a conservative approach for all other cost items.

k. How costs will be met?

The costs of the trading system have been met through a French Government grant as explained above.

Running costs will be met from fees and commissions the ASE charges for trading, listing, and information dissemination (please see "Income Statement").

l. Does the financial structure include debt? If so, then the following information is needed:

i. Who is providing loans to the ASE?

ii. Which are the anticipated senior and subordinated lenders?

iii. What are the currencies involved?

iv. Are any loans tied to conditions such as subsidized interest rates or procurement issues?

v. What are the terms and conditions of all the other loans involved or already existing on the balance sheet?

vi. A description of the nature of the security available to the lenders

At this time, the financial structure does not include debt.

However, since one of the goals for the **ASE** is to functions as a self-sustaining private sector enterprise, it may wish to consider attracting funds to support its future activities by **going directly to the capital**

markets, laws and regulations permitting. There are various ways in which this could be structured such as pure equity (pursuant to demutualization), debt, or mezzanine finance.

ASE by-laws empower the Board of Directors to borrow for the purposes of securing the necessary funds to manage the ASE.

m. Are there any agreements in place that will affect the financial structure, such as:

i. *Sales agreements or take-off agreements:*

Sales agreements do exist with information vendors. Such agreements will affect the financial structure in the sense that they will increase revenues.

Future revenue sharing agreements with other exchanges may have more of an impact. A detailed analysis needs to be carried out to ascertain the impact such arrangements might have on ASE trading volumes and revenues.

ii. *Guarantees by sponsors or third parties:*

The relevant rules and regulations state that members are collectively responsible to cover any deficits. Their contributions in this scenario are to be considered as debt to be repaid from future retained earnings.

Additionally, the ASE may expect to receive grants and technical assistance from USAID/AMIR and other sources.

iii. *Additional support agreements:*

A maintenance and upgrade agreement with the Paris Bourse is currently being negotiated.

iv. *Government support such as subsidies, tax holidays, etc.:*

The ASE is currently exempt from taxes. No other subsidies exist.

2. Financial Projections

The information provided here should illustrate financial overview and anticipated performance of the ASE over a five-year period. This would allow for assessing the ASE's ability to generate sufficient cash flow to run its operations.

The following key operating assumptions, by year, should be utilized:

a. Price by product and service:

ASE revenues are derived from the following sources:

i. Listing Fees:

- *Initial Fees:*

  Depending on its competitive strategy, the ASE may wish to consider having listed companies pay initial listing fees.

- *Annual Fees:*

  0.0004 of the nominal value of listed securities up to a maximum amount of JD3000.

  0.0002 of the nominal value of bonds up to a maximum of JD2000.

  JD250 per issue for bonds issued by the Government, public institutions, or municipalities.

ii. Trading Fees:

- *Membership:*

  JD500 per year per members.

- *Trading:*

  The amount of 0.0006 of the market value of traded securities from the buyer and the seller.

  The amount of 0.0001 of the market value of traded bonds from both the buyer and the seller.

  The amount of 0.001 of the market value of each contract as a transfer of ownership commission from one of the contracting parties.

ii. *Information and Price Dissemination Fees:*

It could be argued that an exchange has property rights to prices formed on it. Information on such prices and other data can be sold.

Agreements currently exists with:

- Reuters: $5 per month per subscriber.
- IFC: JD5,600 per annum.
- Arab Monetary Fund: JD2,100 per annum.
- Access agreement is expected to expire mid of next year. All payments go to the JSC as per settlement.

iii. Other Revenues:

- Developing and selling proprietary software: Not active.
- Fines:
  No figures available.

b. A breakdown of operating expenses, including:

i. *Labor:*

A staff of 25 with total annual compensation at around JD333,000. The Board of Directors' compensation stands at JD53,000. The two figures are estimated to increase to JD488,000 and JD77,000 respectively in 2004.

ii. *Raw material:*

None.

iii. *Transport*

None. Transportation allowances have been included in the Board of Directors' compensation and in marketing and maintenance.

iv. *Utilities:*

JD36,000 estimated for this year and is expected to increase to JD53,000 in 2004. The figure includes both electricity and telecommunication expenses.

v. *IT linkups*

Costs included in utilities and maintenance.

vi. *Marketing:*

An estimated budget of JD20,000 for this year to increase gradually to about JD70,000 in 2004.

vii. *Training:*

An estimated budget of JD30,000 for this year to increase to around JD44,000 in 2004.

xi. Supplies and Insurance:

Estimated at JD24,000 for this year to increase to around JD35,000 in 2004.

c. Capital expenditures on a yearly basis for maintenance:

Maintenance and upgrade of the trading system is estimated at JD50,000 for next year.

For this year only half the amount is budgeted for because of a six-month free maintenance period as per the agreement with the system provider. The figure is estimated to increase to around JD53,000 in 2004.

Other maintenance and upgrade is estimated at JD20,000 for this year to increase to around JD29,000 in 2004.

3. Projected Income Statement and Balance Sheet

a. Projected Income Statement:

	2000	2001	2002	2003	2004
Revenues					
Listing	318,045	359,944	436,894	558,071	723,076
Trading	551,814	629,754	748,529	890,807	1,061,281
Information Dissemination	18,200	71,085	114,329	175,612	228,151
Subscription Fees	217,000	420,475	827,011	1,234,150	1,640,719
Total	**1,105,059**	**1,481,258**	**2,126,763**	**2,858,640**	**3,653,227**
Expenses					
Rate of Increase in Salaries		20%	20%	20%	20%
Employee Compensation	333,115	399,738	479,686	575,623	690,747
Board of Directors Compensation	53,000	58,300	64,130	70,543	77,597
Training	30,000	36,000	43,200	51,840	62,208
Marketing	20,000	40,000	80,000	100,000	100,000
Maintenance of Trading System	20,000	50,000	55,000	60,500	66,550
Maintenance of Other	20,000	22,000	24,200	26,620	29,282
Organizational Subscriptions	9,428	11,314	13,576	16,292	19,550
Office Supplies & Printed Matter	20,000	22,000	24,200	26,620	29,282
Insurance	4,000	4,400	4,840	5,324	5,856
Telecommunication	36,000	43,200	51,840	62,208	74,650
Outside Consultants	0	0	20,000	30,000	40,000
Other /Contingency	19,000	20,900	22,990	25,289	27,818
Depreciation	40,111	40,111	40,111	40,111	40,111
COGS	**604,654**	**747,963**	**923,773**	**1,090,970**	**1,263,652**
Gross Profit	**500,405**	**733,295**	**1,202,990**	**1,767,670**	**2,389,576**
Rent	**100,000**	**100,000**	**100,000**	**100,000**	**100,000**
Net Income	**504,654**	**647,963**	**823,773**	**990,970**	**1,163,652**
Taxes					
Net Income After Taxes	**504,654**	**647,963**	**823,773**	**990,970**	**1,163,652**
Retained Earnings	**504,654**	**1,009,309**	**1,657,271**	**2,481,045**	**3,472,014**
Total Distributable Income	**1,009,309**	**1,657,271**	**2,481,045**	**3,472,014**	**4,635,666**

b. Projected Balance Sheet:

		2000	2001	2002	2003	2004
Assets						
Current Assets						
Cash		1,704,654	2,209,309	2,857,271	3,681,045	4,672,014
Fixed Assets		362,634	362,634	362,634	362,634	362,634
Accumulated Depreciation		40,111	80,223	120,334	160,445	200,556
Total Fixed Assets		322,523	282,411	242,300	202,189	162,078
Total Assets		**2,067,288**	**2,571,943**	**3,219,905**	**4,043,679**	**5,034,648**
Equity and Liabilities						
Equity						
Capital	100%	1,562,634	1,562,634	1,562,634	1,562,634	1,562,634
Retained Earning		504,654	1,009,309	1,657,271	2,481,045	3,472,014
Equity		***2,067,288***	***2,571,943***	***3,219,905***	***4,043,679***	***5,034,648***
Liabilities						
Short Term Loan	0%	-	-	-	-	-
Long Term Loan	0%	-	-	-	-	-
Total Equity & Liabilities		**2,067,288**	**2,571,943**	**3,219,905**	**4,043,679**	**5,034,648**

	1999	2000	2001
Total Sales			
Listing Fees			
Banking Sector			
Banking Sector / Shares			
Number of Listed Banks	19	17	15
Minimum Listed Capital	20,000,000	20,000,000	20,000,000
Listing Fee (up to a maximum of JD3000)	0.0004	0.0004	0.0004
Total	*57,000*	*51,000*	*45,000*
Banking Sector / Bonds			
Number of Listed Issues	1	1	2
Value of Listed Issues	10,000,000	10,000,000	20,000,000
Listing Fee (up to a maximum of JD2000)	0.0002	0.0002	0.0002
Total	*2,000*	*2,000*	*4,000*
Banking Sector / Investment Funds			
Number of Listed Investment Funds	1	2	5
Average Value per Listed Fund	37,600	100,000	300,000
Listing Fee (up to a maximum of JD3000)	0.0004	0.0004	0.0004
Total	*15.04*	*80.00*	*600.00*
Total Banking Sector	**59,015.04**	**53,080.00**	**49,600.00**

Insurance Sector

Insurance Sector / Shares			
Number of Listed Companies	24	20	18
Average Listed Capital	2,625,000	3,000,000	4,000,000
Listing Fee (up to a maximum of JD3000)	0.0004	0.0004	0.0004
Total	25,200	24,000	28,800
Insurance Sector / Bonds			
Number of Listed Issues	-	1	2
Average Value of Listed Issues	-	1,000,000	1,500,000
Listing Fee (up to a maximum of JD2000)	0.0002	0.0002	0.0002
Total	*0*	*200*	*600*
Total Insurance Sector	**25,200**	**24,200**	**29,400**

Industrial Sector

Industrial Sector / Shares			
Rate of Increase in Listed Companies		1%	10%
Number of Listed Companies	76	77	84
Listing Fee (up to a maximum of JD3000)	0.0004	0.0004	0.0004
Rate of Increase in Average Listing Fee Value		1%	5%
Average Listing Fee Value per Company	1,866	1,885	1,979
Total	*141,816*	*144,667*	*167,090*
Industrial Sector / Bonds			
Number of Listed Issues	3	5	7
Rate of Increase in Total Listed Value		5%	15%
Total Value of Listed Issues	35,600,000	37,380,000	42,987,000
Average Value of Listed Issues	11,866,667	7,476,000	6,141,000
Listing Fee (up to a maximum of JD2000)	0.0002	0.0002	0.0002
Total	*4560*	*7476*	*8597.4*
Total Industrial Sector	**146,376**	**152,143**	**175,687**

Services Sector

Services Sector / Shares				
Rate of Increase in Listed Companies		1%	10%	
Number of Listed Companies	43	43	48	
Listing Fee (up to a maximum of JD3000)	0.0004	0.0004	0.0004	
Rate of Increase in Average Listing Fee		1%	5%	
Average Listing Fee per Company	1,895	1,914	2,010	
Total	*81,485*	*83,123*	*96,007*	
Services Sector / Bonds				
Number of Listed Issues	1	3	5	
Rate of Increase in Total Listed Value		50%	67%	
Total Value of Listed Issues	10,000,000	15,000,000	25,000,000	3
Average Value of Listed Issues	10,000,000	5,000,000	5,000,000	
Listing Fee (up to a maximum of JD2000)	0.0002	0.0002	0.0002	
Total	*2000*	*3000*	*5000*	
Total Services Sector	83,485	86,123	101,007	

Public Sector

Bonds by Government			
Number of Listed Issues	-	10	15
Listing Fee (JD, fixed per issue)	250	250	250
Total	-	2,500	3,750
Bonds by Municipalities			
Number of Listed Issues	-	-	1
Listing Fee (fixed per issue)	250	250	250
Total	-	-	250
Bonds by State Owned Enterprises			
Number of Listed Issues	-	-	1
Listing Fee (fixed per issue)	250	250	250
Total	-	-	250
Total Public Sector	**-**	**2,500**	**4,250**
Total Listing Fees	**314,076**	**318,045**	**359,944**

Trading Fees

For Shares				
Rate of Increase in Trading Volume		5%	15%	
Trading Volume	403,915,426	424,111,197	487,727,877	5
Trading Fee	0.0006	0.0006	0.0006	
Total	**484,699**	**508,933**	**585,273**	
For Bonds				
Rate of Increase in Trading Volume		5%	15%	
Trading Volume	4,097,316	4,302,182	4,947,509	
Trading Fee	0.0001	0.0001	0.0001	
Total	**819**	**860**	**990**	
For Off-Floor Transactions				
Rate of Increase in Off-Floor Transactions	3.5%	3.5%	3.5%	
Trading Volume (average for last 5 years)	40,599,175	42,020,146	43,490,851	
Average Trading Fee (Average for last 5 years)	0.001	0.001	0.001	
Total	**40,599**	**42,020**	**43,491**	
Total Trading Fees	**526,117**	**551,814**	**629,754**	

Information Dissemination Fees

IFC				
	Rate of Increase			5%
	Fee	5,600	5,600	5880
	Total	**5,600**	**5,600**	**5,880**
AMF				
	Rate of Increase			5%
	Fee	2,100	2,100	2205
	Total	**2,100**	**2,100**	**2,205**
ACCESS				
Reuters				
	Rate of Increase in Fee per Subscriber			5%
	Number of Subscribers		350	500
	Rate per Subscriber		60	63.0
	Total		10,500	31,500
Bloomberg				
	Rate of Increase in Fee per Subscriber			5%
	Number of Subscribers		0	500
	Rate per Subscriber		60	63.0
	Total		**-**	**31,500**
Total Information Dissemination Fees			**18,200**	**71,085**

Members Subscription Fees

Annual			
Number of Members	33	34	39
Annual Fee		500	525
Total		17,000	20,475
One-Time			
Number of New Members		1	2
Fee		200,000	200,000
Total		200,000	400,000
Total Subscription Fees		**217,000**	**420,475**

XIV. APPENDICES

Appendix One: LIST OF DOCUMENTS READ DURING CONSULTANCY

AMIR, "Jordan Capital Markets: Technical Assistance Work Plan," December 11, 1999.

AMIR, "Jordan Capital Markets: A Strategy for Listing Corporate Securities on the Amman Stock Exchange," November 1999.

AMIR, "Dissemination of Market Information," October 23, 1999.

AMIR, "Training Action Plan," February 2000.

Jordan Securities Commission, "The Securities Law," 1997.

Amman Stock Exchange, Regulations for Listing of Securities, new Draft in Arabic.

Amman Stock Exchange, "Instructions for Listing and Suspension of Trading in Shares of Public Shareholding Companies."

Amman Stock Exchange, Regulations for Electronic Trading of Securities, Arabic Version.

Amman Stock Exchange, "Regulations for the Fees and Commissions of the Amman Stock Exchange."

Amman Stock Exchange, "Internal By-Laws of the Amman Stock Exchange Securities Market."

Amman Stock Exchange, "Directives on Disclosure Related to Amman Stock Exchange."

Amman Stock Exchange, "Code of Ethics of Amman Stock Exchange."

Amman Stock Exchange, NewsLetter, Issue No. 7, February 2000.

Amman Stock Exchange, Monthly Statistical Bulletin, Number 85, January 2000.

Amman Stock Exchange, Monthly Statistical Bulletin, Number 86, February 2000.

Amman Stock Exchange, Estimated Budget for the Year 2000, Arabic Version.

Amman Stock Exchange, First Annual Report, Arabic Version, 2000.

Amman Stock Exchange, Web Site.

OptiMark Technologies, Inc., "Portfolio Trading and Electronic Networks," October 28, 1999.

Arizona State University, "A Tale of Two Cities: An Analysis of Execution Costs on Paris and New York," Draft, June 1999.

Eric Theissen, Groupe HEC, Department Finance et Economie, and Johann Wolfgang Goethe-Universitat Frankfurt/Main, "Floor versus Screen Trading: Evidence from the German Stock Market," December 1999.

Rene M. Stulz, The Ohio State University and National Bureau of Economic Research, "International Portfolio Flows and Security Markets," August 1997.

Beni Lauterbach, UCLA, "A Note on Trading Mechanism and Securities' Value: The Analysis of Rejects From Continuous Trade."

Reena Aggrawal and James J. Angel, Georgetown University, "Optimal Listing Policy: Why Microsoft and Intel Do Not List on the NYSE," September 1997.

The World Bank, "Private Capital Flows to Developing Countries - Summary," 1997.

The World Bank, "Global Economic Prospects," 2000.

The World Bank, "Stock Markets: A Spur to Economic Growth."

The World Bank, "Equity Markets, Transaction Costs, and Capital Accumulation," May 1995.

The World Bank, "Stock Market Development and Firm Financing Choices," May 1995.

The World Bank, "Stock Market Development and Financial Intermediaries," May 1995.

The World Bank, "Stock Market Development and Long-Run Growth," March 1996.

The World Bank, "Stock Market and Investment," March 1996.

The World Bank, "Stock Markets, Banks, and Economic Growth," December 1996.

The World Bank, "Stock Markets, Growth, and Policy," August 1990.

The World Bank, "Stock Markets in Developing Countries," October 1990.

The World Bank, "Stock Market Development and Financial Intermediary Growth," July 1993.

The World Bank, "Stock Market Development and Financial Deepening in Developing Countries," February 1993.

The World Bank, "Stock Markets, Corporate Finance, and Economic Growth," July 1996.

The World Bank, "The Rise of Securities Markets," November 1995.

The World Bank, "Regulation of Securities Markets," January 1992.

The World bank, "Developing Country Capital Structures and Emerging Stock Markets," July 1992.

International Finance Corporation, "An Introduction to the Microstructure of Emerging Markets," 1994.

Matthew Clayton, New York University, Bjorn Jorgensen, Harvard University, and Kenneth Kavajeez, University of Pennsylvania, "On the Formation and Structure of International Exchanges," September 23, 1999.

Ian Domowitz, Pennsylvania State University, and Ruben Lee, Oxford Finance Group, "The Legal Basis for Stock Exchanges: The Classification and Regulation of Automated Trading Systems," March 1998.

Ian Domowitz , Pennsylvania State University, and Benn Steil, Economics Program - Council on Foreign Relations, "Automation, Trading Costs, and the Structure of the Trading Services Industry," November 1998.

Carmine Di Noia, University of Pennsylvania, "Competition and Integration among Stock Exchanges in Europe: Network Effects, Implicit Mergers and Remote Access," February 8, 1998.

International Organization of Securities Commissions, "The Influence of Market Makers in the Creation of Liquidity," May 1999.

International Organization of Securities Commissions, "Measures To Disseminate Stock Property," May 1999.

Bank of International Settlements, "Market Liquidity: Research Findings and Selected Policy Implications," May 3, 1999.

Appendix Two: LIST OF INTERVIEWS

H.E. Dr. Tayseer Abdel Jaber	Commissioner, JSC
Mr. Maan Jalamdeh	Capital Markets Coordinator, JSC
H.E. Mr. Jalil Tarif	Chief Executive Officer, ASE
H.E. Mr. Nader Azar	Assistant Chief Executive Officer, ASE
Mr. Mithqal Obeidat	Acting Head, Legal Department, ASE
Mr. Khalil Khasawneh	Acting Head, Trading Department, ASE
Ms. Raida Naber	Acting Head, Membership Department, ASE
Mr. Nidal Hamdan	Acting Head, Finance & Administration Department, ASE
Mr. Abdel Razzaq Al-Farah	Acting Head, Internal Audit Department, ASE
Mr. Ismail Hajjaj	Acting Head, Research & Public Relations Department, ASE
Mr. Muhammad Khatib	Acting Head, IT Department, ASE
Mr. David Lister	Capital Markets Partners Limited
Mr. William Gorman	AMIR Program
Mr. Khush Choksy	AMIR Program

Appendix Three: MEASURING STOCK MARKET DEVELOPMENT

An exchange is part and parcel of the institutions of the financial services industry. Generically, the financial services industry fulfills such tasks as mobilizing savings, managing risk, allocating resources, and facilitating transactions. The financial services industry influences and is influenced by economic development.

Since a "developed" securities market positively contributes to economic development, it behooves economic policy architects and stock market administrators to devise ways in which the level of development of the stock market can be measured over time.

Recent literature on securities markets suggests comparisons between developed and developing stock markets based on three parameters:

1. Traditional Characteristics:

   These include market capitalization, market capitalization to GDP, traded value to GDP, amount of new capital raised through stock offerings, number of listed companies, and turnover.

2. Institutional Characteristics:

   Developed stock markets usually have prudential supervisory bodies, information disclosure rules, internationally accepted accounting standards, low transaction costs, and short settlement times. Institutional characteristics tend to be qualitative and subjective in nature.

3. Asset Pricing Characteristics:

   These include the efficiency with which the market prices risk and the degree of integration into world stock markets.

However, traditional characteristics are found to exhibit shortcomings. For example, companies may list to take advantage of tax incentives and a high traded value to GDP may reflect trading of only a small portion of the total listed stocks. The ratio of market capitalization to GDP tells of the importance of the listed companies but not of the ease of conducting transactions or of the efficiency with which the assets were priced. Perhaps the best indicator in this category would be the turnover ratio which measures value traded to market capitalization. However, this measure also does not tell about the efficiency with which assets were priced or the degree of integration with international markets.

To get around such shortcomings, asset-pricing models are usually utilized. The Arbitrage Pricing Model is recommended as the main asset-pricing model to deploy in this endeavor.

The reasoning goes that there should be no arbitrage opportunities available in a developed and efficient stock market. Hence, different types of risk should be priced equally across assets within a country and across assets in different countries.

However, if there are impediments in the stock market that hinder trading and effective information flow, then risk may be priced differently across assets within a country, or across assets in different countries. This mis-pricing can be measured by the Arbitrage Pricing Model. As a result, a "domestic asset pricing efficiency" indicator can be calculated.

The advantages of this approach in measuring a stock market's development or efficiency is that it produces a number. Markets are relatively efficient or relatively less efficient; an analog concept and not a digital application. As such, efficiency, or inefficiency, falls within a spectrum.

Appendix Four: INCREASING SHARE OWNERSHIP

The number of shareholders in a developing country is indicative of several trends and has several consequences. One consequence is that it enhances capital formation. Another is helping achieve a fairer distribution of wealth, which contributes to political stability and economic growth. Having a diversified domestic shareholding base helps cushion against periods of international turmoil such as the Russian and Asian crises of late. And finally, it enhances liquidity in the market.

An exchange increases its revenues as more securities are traded over it. One of the ways to increase trading is to find ways of increasing the number of shareholders.

Developing countries tend to show that small percentages of the population own stocks and that exchange trading is concentrated in a small number of shares of big companies, coveted by both foreign and domestic investors.

Several international bodies have come up with regulatory recommendations that would facilitate the dissemination of stock property in developing markets. These include:

1. Legal Provisions:

    a. an issuer's capital requirements (e.g. in order to be listed)

    b. maximum percentages of stock holdings for institutional investors; and,

    c. privileges granted to retail investors (e.g. first refusal rights in cases of new offerings).

2. Tax Incentives:

    For example, beneficial tax treatment related to the acquisition of shares.

3. Other Measures:

    Mostly directed at improving market liquidity and transparency, these may include such things as:

    a. Having a percentage of shares of privatized state-owned enterprises sold in the domestic market and the encouragement of the emergence of mutual funds.

b. Issuing shares to the general public or to employees pursuant to privatizations of state-owned enterprises.

The growth of employee share ownership owes much to this practice. Another way of implementing the practice would provide for favorable conditions for the acquisition of shares in privatized companies by employees and clients.

c. Incentives for Increasing Listings:

To encourage family-owned companies to go public, regulatory authorities could:

i. allow for the creation of special markets to negotiate shares and bonds of small companies, such as over-the-counter;

ii. allow for favorable listings requirements such as those related to capital as well as to the minimum number of shareholders;

d. Non-Voting Shares:

Not all shareholders are interested in voting and not all owners welcome the prospect of losing control. The ability of companies to issue non-voting shares, with or without preferred dividends, would address these issues and further facilitate the flow of savings towards investments.

e. Promoting an Investment Culture:

Investor confidence as to prospects of economic growth increases their proclivity to invest more in a wider range of securities and in riskier instruments. Investor confidence should encompass their confidence in their own abilities to forecast and evaluate economic growth and opportunities as well as their confidence in the forecasts and evaluations of others.

Educational campaigns promulgated by regulatory bodies are essential. Various tools can be utilized for this purpose including monthly bulletins, brochures, regular television presentations, press releases, seminars, training sessions, internet material, etc.

The purpose is for investors, current and potential, to understand how the financial industry and securities markets operate and how investors can guard against fraud and abuse.

Hence, promoting an investment culture addresses issues related to both investor protection and market development.

f. Increasing Market Liquidity (please see "Notes on Liquidity").

g. Increasing Market Transparency.

h. Increasing Investment Opportunities.

i. Protection of Minority Shareholders' Rights:

   i. Provisions in corporate law related to shareholders' rights to seek court revision of and action on decisions of the General Assembly.

   ii. Minority or majority shareholders may exercise their rights for their own benefits regardless of the company's interests. Hence such regulation should have the company's interests as the main guideline.

   iii. An auditing body eases minority shareholders' concerns since it addresses issues of effective and complete disclosure of both financial and non-financial data concerning a company's business and governance.

   iv. Developing channels to formalize investor complaints.

   The most common complaints tend to be related to:

   - Non-payment of dividends
   - Non-fulfillment of disclosure requirements by issuers
   - Unauthorized trading

- Illegal advertisement promising regular profits
- Misunderstandings of the securities market's functions
- Failure of brokers to execute client orders
- Delays in transfers of accounts and redemption of funds

j. Issuing shares to company managers and employees:

Such a practice is not usually widespread in developing countries and tends to increase as the country moves from being a pre-emerging market to being an emerging market. In an emerging market, company owners learn that the survival and success in turning their companies from local operations to regionally and international competitive enterprises necessitates that they attract and keep the best talent.

In such markets it also becomes clear that managers and employees should have a vested interest in the success of the company and its initiatives beyond those of employment security and regular salary considerations.

Tax exemptions conferred on either the issuing company or the employee receiving the shares help promulgate this practice.

k. Measures to encourage brokers to accept retail investors as clients:

These are mostly linked to the way brokerage commissions are established.

l. Dissemination of Market Information:

Various measures can be undertaken to allow retail investors to monitor stock quotations and other market information on a real-time basis. This can be done via such venues as special TV cable or satellite channel programs, computer terminals, Internet, etc.

Appendix Five: NOTES ON LIQUIDITY

Recent studies have concluded that of all the parameters utilized to judge a stock market's development and efficiency, market liquidity, as measured by the value of stock trading relative to the size of the market and by the value of trading relative to the size of the economy, is positively and significantly correlated with current and future rates of economic growth, capital accumulation and productivity growth.

Put differently, many high-return projects require long-term capital commitments. Liquid markets enable investors to trade ownership of assets, which facilitates the continued supply of long-term capital and provides investors with exit whenever they deem it fit. As some observed, the industrial revolution had to wait for the financial revolution to occur and that investors will come if they can leave

Market liquidity is a complex and multi-faceted issue. Simply put, a liquid market allows participants to rapidly execute large transactions with a small resulting impact on prices.

Market liquidity is particularly relevant when looking at microstructure. Microstructure studies consider liquidity from more than one angle:

1. Tightness:

   Tightness denotes how far transaction prices diverge from mid-market prices. It is generally measured by the bid-ask spread.

2. Depth:

   Depth indicates the volume of trades that is possible to take place without affecting current market prices. It can also indicate the amount of orders or the order books of market makers at any given point in time.

3. Resiliency:

   Resiliency denotes the speed with which price changes resulting from trades as dissipated. It can also mean how fast imbalances in order flows are adjusted.

Liquidity exhibits three trends:

a. Concentration:

   Liquidity tends to be concentrated in certain markets or instruments, many times at the expense of other closely related markets.

b. Evaporation:

Liquidity tends to evaporate from markets as what happened during the recent Asian and Russian crises.

c. Flight to Liquidity:

Investors tend to pay a premium to hold liquid assets.

Three major factors tend to impact liquidity:

i. Product Design:

Product design impacts the ability to substitute one product for another. A high level of substitutability usually leads to a concentration of liquidity in one out of a range of substitutable products.

ii. Market Microstructure:

- Although the nature of a traded instrument tends to impact its trade execution systems in more ways than one, this is changing because of technological advances in trading systems.

- smaller transaction costs may enhance market liquidity, but the impact of such an element varies according to specific market conditions.

- Gauging the impact of transparency of market data on liquidity is not easy. Transparency's impact tends to depend on the underlying information, especially to what extent participants are able to observe different kinds of information.

iii. Behavior of Market Participants:

The problem of self-fulfilling expectations dominates discussions of market participants' behavior. Many times liquidity is present or absent because markets expect it to be present or absent.

Additionally, the following were recently found to impact market liquidity:

- Traders' sensitivity to short-term price movements;

- Traders' degree of risk aversion; and,

- Traders' levels of confidence in their own forecasts concerning price levels.

Generally, the following measures are recommended to enhance market liquidity:

1. Maintaining a competitive structure of trading:

   This tends to increase liquidity by creating conditions for narrower bid-ask spreads in over-the-counter dealer markets. For organized exchanges, competition between exchanges or with over-the-counter markets could lower trading costs and increase information dissemination. However, it should be noted that a fine line exists between competition of this sort and over-fragmentation which may actually reduce liquidity.

2. Minimizing the impact of taxes on market liquidity:

   Regulatory authorities and stock exchange administrators should carefully weigh the negative impact of a transaction tax against the revenues it generates. Additionally, withholding taxes have bigger negative impacts when imposed on assets that often trade or on entities that actively trade.

3. Increasing transparency:

   In addition to the above, generally, transparency improves the functioning of a stock market. It increases the degree of reliability in price discovery and efficient risk allocation.

4. Standardized trading and settlement procedures:

   Adhering to the most standardized trading and settlement procedures would alleviate market fragmentation and, as a result, reduce transaction costs.

5. Promoting diversity among market participants:

   Diversity among market participants, which reflects different transaction needs and investment goals, tends to increase market liquidity. This is another good reason why the inclusion of foreign investors tends to improve liquidity as this tends to enhance diversity.

6. Promoting "core" asset markets:

   Identifying and promoting core asset markets that enjoy ample liquidity would benefit the whole financial system.

Broadly speaking, there three types of intermediaries in a market: dealers, who tend to use their own capital to take proprietary positions in the market; market makers, who function as dealers but have obligations to provide liquidity (Please see "Appendix Six"); and, specialists, who provide liquidity to the securities in which they specialize.

Markets differ in terms of formally assigning such roles to intermediaries. Markets also differ as to whether intermediaries are necessary to enhance liquidity. This seems to depend on such variables as the types of securities traded. For example, small capitalization stocks tend to be thinly traded and would benefit from formal intermediary roles in enhancing liquidity. For other markets, automatic order matching would be sufficient. Yet a third category of markets would opt for hybrid systems whereby an automated order-matching system is used for liquid securities and dealer systems for less liquid ones.

Having intermediaries play a role in providing liquidity to a market has its costs. These can be summarized in terms of: the *costs of market making*, such as those associated with having higher spreads; the *costs of potential price collusion*; and, the *costs of potential lack of transparency of the order flow*.

For intermediaries to be able to fulfill liquidity-enhancing roles, they need to have the following capabilities:

a. Effective Front Office Activities:

    This includes the ability to take positions and generate a sufficient level of transactions.

b. Effective Back Office Activities:

    Of particular importance is the ability to separate client accounts from proprietary ones and to support clearance and settlement accurately and on a timely basis.

c. Generate Profits:

    An intermediary's ability to generate profits while undertaking liquidity-enhancing roles is impacted by the costs it incurs and the types of privileges it is granted. Privileges could include tax exemptions, the ability to set spreads, and allowing intermediaries to function as both brokers and dealers under one corporate umbrella which enables them to take customer orders and trade for their own accounts (i.e. a "dual capacity" firm). Since some of these privileges can lead to bad practices, a tradeoff choice is usually at play here.

How can intermediaries finance their operations:

- use their inventory as collateral to borrow against;
- use own accounts at the depository as collateral to borrow against; or,
- borrow and lend securities (short selling).

The needed infrastructure to support these funding techniques needs to be in place.

On the other hand, lack of access to a liquid market may impact firms' behavior in three possible ways:

1. Investors' opportunities to diversify risk would become limited. Hence, they would pursue investment strategies that reduce their risk at the expense of long-term growth by investing less or by choosing less capital intensive investments.

2. Firms would face difficulties balancing debt and equity funding. The presence of a liquid stock market would allow firms to issue equity which enables them to borrow more.

3. Investors and creditors are likely to have less information about firms, leading them to invest less and to invest less wisely.

As a result, firms that are not able to enjoy the benefits of a liquid market tend to be smaller and tend to grow slower than could otherwise be.

Appendix Six: NOTES ON MARKET MAKERS

Market makers are participants in quote-driven financial instrument trading systems that fulfill the function of generating bids and offers. They enhance liquidity in a market by consistently quoting buying and selling prices and, as a result, ensure the existence of a two-way market for securities.

Specifically, market makers make a market in a stock by buying and selling from their own inventory when orders to buy or sell that stock are not available. They also may maintain the market book of orders, which consists of limit orders to buy and sell as well as stop orders placed by market participants.

Part of the importance of market makers stems from the fact that market liquidity is asymmetrical; it tends to be high in times of strong demand for securities (bull markets) and tends to dry up when everyone is selling (bear markets).

Market makers need to have sufficient financial muscle to be able to fulfill their function. They often have to buy large quantities of securities during a bear market that they can only sell at a later time. This might cause them to suffer losses during bear markets. That is why they are usually financial institutions or banks.

To facilitate their function, exchanges and regulatory bodies usually grant certain privileges to market makers. This includes the right to trade in a dual capacity (i.e. principal or agent) and to execute large orders away from the trading floor (i.e. block trades).

In developed markets that are typically more liquid than developing countries' exchanges, market makers can easily be found. This leads to having a situation whereby several market makers compete to create a market in a particular security. However, in developing countries with typically less liquid markets, market makers are not easily lured into their function and, when found, they need more financial resources than their developed market cousins.

Additionally, exchanges in developed countries are more likely to depend on market participants to provide liquidity, while in developing countries there are more demands for market makers to provide this function.

Recently, market maker funds have emerged. Such a fund typically acts as a "fund of funds" investing in a variety of private funds that finance market makers and specialists on exchanges.

Some of the main issues that markets struggle with when designing microstructure is whether market-making will:

1. cause spreads to increase or decrease; and,

2. cause volatility to increase or decrease (by allowing market makers to hold inventories and to gather information).

It should be noted that although some markets do not have market-making activities explicitly embedded in their microstructures, they do allow some traders to specialize in certain securities. This *de facto* allows for the provision, though informally, of some of the benefits that accrue out of market making; namely, liquidity and information gathering.

Low transactions costs of an auction market and the marketing advantages of a dealer market must be weighed against each other when firms decide to list. The higher spreads in dealer markets provide incentives to broker/dealers to generate order flow in a stock, thus increasing liquidity.

However, it is becoming increasingly possible for large institutional investors to bypass dealer markets and trade directly with one another via automated trading systems such as Instinet. In this way, they can achieve lower transaction costs. Firms with high institutional ownership that uses ATMs would opt to stay on dealer markets.

For the listed companies, having a larger investor pool reduces their cost of capital. Transaction costs, such as spreads, increase the cost of capital. Since investors know that they will incur certain transaction costs, the price of the security will be discounted to reflect the present value of the expected future transaction costs.

Generally, the spread has three components:

a. *Order Processing Costs:*

   The labor, communication, clearing and record keeping costs of a trade. This is a fixed dollar amount per trade. As a result, spreads per share decrease in dollar value as trade size increases. Electronic trading systems help achieve significant reductions in order processing costs.

b. *Inventory Control Costs:*

   The assumption here is that a market maker has an optimum inventory level and that any trade that moves the inventory away from this level increases the market maker's risk. The market maker is compensated for the increase in risk. As a result, inventory risk cost is directly proportional to trade size, market price, and price volatility. It is inversely proportional to trading frequency.

c. *Adverse Selection Costs:*

Adverse selection costs are due to the presence of informed traders in the market. This causes a market maker to incur losses on trades with these traders. As a result, the market maker would charge a fee on each such trade so that the expected profit on it is zero.

Appendix Seven: NOTES ON AUTOMATION

Automation impacted exchanges in four main ways:

1. it allowed for the development of new trading systems;

2. it eliminated the need for one-on-one contacts in markets;

3. it reduced the costs of putting up new trading systems; and,

4. it allowed for speed and routing in the transmission of market data to a larger group of stakeholders, facilitating cross-border trading.

An automated trading system can be classified at a securities exchange, a broker, a dealer, or a national securities association. Hence, defining what an exchange is becoming more difficult as alternative trading systems gain market share. Regulating the market for the provision of trading services needs to take into consideration safeguards that maintain the integrity and safety of the financial system and protecting investors but without choking off competition.

It is difficult to compare the costs of operating an automated versus a floor-based trading system between countries because of differences in trading volumes, value-added services, and regulations. However, recent information indicates that cost savings associated with switching from a floor-based to an automated trading system are considerable. In the case of the Sydney Futures Exchange, the figure was around 40%. As such, cost has been the driving factor in propelling automated trading systems forward. Cost advantages also include free riding on the price discovery process on regular exchanges.

Five principles are currently impacting regulators of trading services. These are:

i. The protection of all investors.

ii. Competition among exchanges and other trading venues should be preserved and encouraged.

iii. Markets should be open, accessible and transparent. Price discovery information and execution quality should be easily available to more market participants.

iv. Liquidity pools should be linked to encourage consolidation rather than fragmentation. This will enhance efficiencies and enable investors to realize better executions.

v. Regulation should aim for fairness, integrity and guard against conflicts of interest. This is particularly relevant when an exchange moves to demutualize.

At the heart of these five principles is the belief that the market structure is moving towards a few, electronically driven, central markets, or networks, linked to every individual exchange and trading venue.

However, one relevant factor is that of distance costs. Distance costs in automated trading systems are negligible compared to floor-based systems. The latter's distance costs tend to increase with the distance as traders have to be physically present on the trading floor themselves or through agents.

Furthermore, as automation spreads, exchange seat prices on floor-based exchanges are bound to fall. Resistance from vested interests is to be expected, especially from those who paid high prices for such access. As automated trading systems become accepted, new startups of floor-based ones will disappear.

This is particularly relevant for developing countries since their emerging markets are the main conduits through which international investment is attracted. When viewing various emerging markets, one is struck by the diversity that can be found in microstructure. However, one trend is undisputed: automation.

And finally, one of the control factors in an exchange is reputation. Traders and market participants will tend to shy away from unbecoming behavior, as defined by industry codes and traditions. However, the faceless nature of automated trading may lead to the loss of reputation as a control factor, leading to informed traders taking advantage of uninformed ones.

Appendix Eight: SELF-REGULATION

Self-regulation is an important concept for securities markets. Self-regulatory organizations play three roles at the same time:

1. *first*, they are quasi-governmental bodies charged with implementing securities laws and their own regulations;

2. *second,* they are membership organizations that aim to represent the interests of their members; and,

3. *third*, they are marketplaces in competition with each other.

Hence, it is not difficult to ascertain the kinds of tensions embedded in such divergent roles. These include:

a. As membership organizations, exchanges may end up regulating the markets to the advantage of their members, prejudicing public interest.

b. As a marketplace, an exchange is composed of different types of traders and self-regulation may not be the most efficient way of working out differences between them.

c. A self-regulatory organization may be required to supervise traders who are not interested in the markets that the organization itself operates.

d. Additionally, having more than one self-regulatory organization could lead to duplication in terms of market surveillance and enforcement, with various stakeholders incurring unnecessary costs.

Self-regulatory organizations are different in terms of members, regulatory responsibilities, and economic power. Hence, it is difficult to draw an ideal self-regulatory structure. However, arguments in favor of self-regulation carry more weight:

i. Having market participants participate in regulation augments the abilities of regulatory authorities.

ii. Rules proposed by fellow market participants carry added legitimacy.

iii. Market participants have strong incentives to maintain and enhance the reputation of the markets they trade on.

iv. Private sector talent can contribute to public policy formation without the government having to pay high salaries and fees to obtain it.

v. Self-regulatory organizations tend to have flexible decision making procedures.

vi. Regulatory oversight of self-regulatory organizations helps alleviate conflicts of interest. This calls for public and member representation on the boards of directors of such organizations.

XV. GLOSSARY

Agent	:	An entity, such as a fund manager or custodian, that undertakes a securities loan and negotiates the terms with the borrower on behalf of a customer-owner.
American Depository Receipt (ADR)	:	A security issued by a United States bank in place of the foreign shares held in trust by that bank, thereby facilitating the trading of foreign shares in U.S. markets.
American Stock Exchange	:	The second largest stock exchange in New York.
Arbitrage	:	Profiting from a difference in price when the same security, currency or commodity is traded on two or more markets.
Arbitration	:	A low-cost alternative to settling disputes over securities transactions in the court system.
Ask	:	The price at which someone who owns a security Offers to sell it.
Auction Market	:	The system of trading securities through brokers or agents on an exchange. Typically, buyers compete with other buyers while sellers compete with other sellers for the most advantageous price.

Averages	:	Various ways of measuring the trend of securities prices. The prices of a certain number of stocks are totaled and then divided by a divisor that is intended to compensate for past stock splits and dividends and that is changed from time to time. As a result, point changes in the average have only the vaguest relationship to the currency prices changes in stocks included in the average.
Average Daily Share Volume	:	The number of shares traded per day, averaged over a period of time, usually one year.
Back-to-Back Transactions	:	A chain of securities transactions among three or more counterparties involving the purchase and sale of a single security, for settlement on a single date. The simplest back-to-back trade is a pair of in which one party agrees to purchase securities from a second party and then agrees to sell them to a third party.
Bear Market	:	A condition of the stock market when prices of stocks are generally declining.
Beta	:	A measure of the volatility of a stock relative to the overall market. A beta of less than one indicates lower risk than the market; a beta of more than one indicates higher risk than the market.
Bid	:	The price a prospective buyer is prepared to pay at a particular time for trading a unit of a given security.
Block	:	A large holding or transaction of stock.
Blue-Chip Company	:	Stock in a company with a national reputation for quality, reliability and the ability to operate profitably in good and bad times.

Book-Entry System : An accounting system that permits the electronic transfer of securities without the physical movement of certificates.

Broker : Any person engaged in the business of effecting transactions in securities for the account of others.

Broker-Dealer : A person or firm sometimes acting as broker and sometimes as principal intermediary in securities transactions. A broker is a firm that communicates bid and ask levels to potential principals and otherwise arranges transactions as agent for a fee, without acting as counterparty in the transactions.

Bull Market : A condition of the stock market when prices of stocks are generally rising.

Certificate of Deposit : An agreement with a bank that you will leave your money on deposit for a specified period of time in return for a specific amount of interest.

Central Securities Depository : An institution for holding securities, which enables securities transactions to be processed by means of book entries. Physical securities may be immobilized by the depository or securities may be dematerialized so that they exist only in electronic form.

Clearance : In securities markets, clearance has two meanings. It may mean the process of calculating the mutual obligations of market participants, usually on a net basis, for the exchange of securities and funds. It may also signify the process of transferring securities on the settlement date, and in this sense, the term "clearing system" is sometimes used to refer to securities settlement systems.

Clearing House : A department of an exchange or a separate legal entity that provides a range of services related to the clearance and settlement of trades and the management of risks associated with the resulting contracts. A clearinghouse is often a central counterparty to all trades to be settled through the clearinghouse; the buyer to every seller and the seller to every buyer.

Collateral : An asset or third party commitment that is accepted by the collateral taker to secure an obligation of the collateral provider. Collateral arrangements may take different legal forms; collateral may be obtained using the method of title transfer or pledge.

Commercial Paper : Debt instruments issued by companies to meet short-term financing needs.

Commission : The broker's basic fee for purchasing or selling securities or property as an agent.

Confirmation : The procedure for verifying trade details with a counterparty. This is generally done by exchanging a document (i.e. confirmation) identifying the trade details and any governing legal documentation and verifying the accuracy of the information provided by the counterparty
(i.e. matching).

Custodian : An entity, often a bank, that safekeeps and administers securities for its customers and that may provide various other services, including clearance and settlement, cash management, foreign exchange and securities lending.

Custody Risk : The risk of loss of securities held in custody occasioned by the insolvency, negligence or fraudulent action of the custodian or of a subcustodian.

Dealer	:	An individual or firm in the securities business who buys and sells stocks and bonds as a principal rather than an agent. The dealer's profit or loss is the difference between the price paid and the price received for the same security.
Debenture	:	A promissory note backed by the general credit of a company and usually not secured by any specific collateral.
Default	:	Failure to complete a funds or securities transfer according to its terms for reasons that are not technical or temporary, usually as a result of bankruptcy. Default is usually distinguished from a "fail."
Delayed Opening	:	The postponement of trading of an issue on a stock exchange beyond the normal opening of a day's trading because of market conditions that have been judged by exchange officials to warrant such a delay. Reasons for the delay may be an influx of either buy or sell orders, an imbalance of buyers and sellers, or pending corporate news that requires time for dissemination.
Delivery Versus Delivery	:	A link between two securities transfer (settlement) systems that ensures that a delivery occurs if, and only if, another delivery occurs and vice versa.
Delivery Versus Payment	:	A link between a securities transfer system and a funds transfer system that ensures that delivery occurs if, and only if, payment occurs.
Derivative	:	A financial contract the value of which depends on the value of one or more underlying reference assets, rates or indices.

Diversification : Spreading investments among different types of securities and various companies in different fields and countries.

Family of Funds : Group of mutual funds managed by the same investment management company. Each fund typically has a different objective; one may be a growth-oriented stock fund, another may be a bond fund or money market fund. Shareholders in one of the funds an usually switch their money into any of the family's other funds, sometimes at no charge.

Futures : A contract specifying a future date of delivery or receipt of a certain amount of a specific tangible or intangible product. The commodities usually traded in futures markets include stock index futures, agricultural products, metals, and financial instruments. Futures are used by business as a hedge against unfavorable price changes and by speculators who hope to profit from such changes.

Global Custodian : A custodian that provides its customers with custody services in respect of securities traded and settled not only in the country in which the custodian is located but also in numerous other countries throughout the world.

Going Public : When a company sells shares of itself to the public to raise capital.

Growth Stock : Stock of a company with a record of earnings growth at a relatively high rate.

Hedge Fund : A private investment fund, often leveraged, and often engaging in active trading strategies, including arbitrage. Hedge funds are typically subject to limited regulatory oversight.

Hedging : The purchase or sale of a derivative security, such as options or futures, in order to reduce or neutralize all or some portion of the risk of holding another security.

Index : A statistical yardstick expressed in terms of percentages of a base year or years. An index is not an average.

Initial Public Offering : A company's first offering of shares to the public.

Institutional Investor : An organization whose primary purpose is to invest its own assets or those held in trust by it for others. Includes pension funds, investment companies, insurance companies and banks.

Intermarket Trading System (ITS) : An electronic network of United States exchanges and NASD broker/dealers. The ITS system displays quotes of stocks traded on multiple exchanges. This allows specialists and traders to get the best possible price of a stock for their customers.

International Central Securities Depository : A central securities depository that settles trades in international securities and in various domestic securities, usually through direct or indirect (e.g. local agents) links to local central securities depositories.

Investment Company : A company or trust that uses its capital to invest in other companies. There are two main types: the closed end and the open end (also known as a mutual fund). Shares of closed end investment companies are readily transferable in the open market and are bought and sold like shares. Capitalization of these companies remains the same unless action is taken to change, which is normally a rare event. Open-end funds sell their shares to investors, stand ready to buy back their old shares and are not listed. Open-end funds are so called because their capitalization is not fixed; they issue more shares as people demand them.

Issue : Any of a company's securities or the act of distributing such securities.

Limit Order : An order to buy to sell a stock at a customer specified price.

Load Fund : A mutual fund that is sold for a sales charge by a brokerage firm or other sales representative. Such funds may be stock, bond, or commodity funds, with conservative or aggressive objectives.

Long Position : A condition that the buyer or holder of securities owns more securities than it contracts to deliver (please see "Short Sale").

Margin : The amount or percentage by which the collateral value exceeds the value of securities (funds) on loan (e.g. 2%, 5%, etc). It sometimes refers to the total value of the collateral as a percentage of the loan value (e.g. 102%, 105%, etc). Margin serves to reduce replacement cost exposures resulting from changes in market prices. Initial margin is deposited at the start of the transaction. On the other hand, variation margin is called to deposit following the revaluation, through marking-to-market, or securities or financial instruments that are subject of unsettled transactions.

Margin Call : A demand for additional funds or collateral, following the marking-to-market of a securities lending transaction, if the market value of underlying collateral falls below a certain level relative to the loaned asset. Similarly, if the value of the underlying collateral assets, following their revaluation, were to exceed the agreed margin, the return of collateral may be required.

Market Capitalization : Price per share multiplied by the total number of shares outstanding; also, the market's total valuation of a public company.

Market Risk : The risk of losses in on- and off-balance sheet positions arising from movements in market prices.

Market Order : An order to buy or sell at the best price currently available on the trading floor.

Market Price : The last reported price at which the stock or bond sold, or the current quote.

Marking-to-Market : The practice of revaluing securities and financial instruments using current market prices. In some cases unsettled contracts to purchase or sell securities are marked-to-market and the counterparty with an as yet unrealized loss on the contract is required to transfer funds or securities equal to the value of the loss to the other counterparty.

Matching (or Comparison) : The process for comparing the trade or settlement details provided by counterparties to ensure that they agree with respect to the terms of the transaction.

Mutual Fund : A fund operated by an investment company that raises money from shareholders and invests it in stocks, bonds, options, commodities, or money market securities.

Nasdaq : An automated information network that provides brokers and dealers with price quotations on securities traded over-the-counter.

Nasdaq International : A subsidiary of the NASD headquartered in London. Its mission is to support NASD members in London, serve as liaison to international companies seeking to list securities on Nasdaq, encourage foreign institutional participation in Nasdaq stocks, and heighten the international image of the NASD and its markets.

Nasdaq National Market : A market consisting of more than 3,000 firms that have an American or international shareholder base, have applied for listing, meet strict financial requirements and agree to specific corporate governance standards. To list initially, firms are required to have significant net tangible assets or operating income, a minimum public float of 500,000 shares, at least 400 shareholders, and a bid price of at least $5.

Nasdaq SmallCap Market : A market consisting of more than 1,400 companies that want the sponsorship of market makers, have applied for listing and meet specific and financial requirements. Once a company is approved and listed on this market, market makers are able to quote and trade the company's securities through an electronic trading system.

National Association of Securities Dealers (NASD) : The self-regulatory organization of the securities industry in the United States responsible for the regulation of the Nasdaq stock market and the over-the-counter markets.

Net Settlement : A settlement in which a number of transactions between or among counterparties are settled on a net basis.

Odd Lots : Stock transactions that involve less than 100 shares.

Offer	:	The price at which a person is ready to sell. Opposed to bid, which is the price at which one is ready to buy.
Options	:	A right to buy or sell a fixed amount of a given stock at a specified price within a limited period of time. If the right is not exercised the option expires and the buyer loses the money.
Over-The-Counter (OTC)	:	A method of trading that does not involve an exchange. In the over-the-counter markets, participants trade directly, sometimes through brokers, with each other, typically by telephone or computer links.
Primary Market	:	The process by which a corporation's stock is issued for the first time. It is then sold to the public on the secondary market.
Prime Brokerage	:	The provision by firms, usually large securities houses, of credit, clearing, securities lending and other services to clients.
Principal	:	A party to a transaction that acts on its own behalf. In acting as a principal, a firm is buying or selling (or lending or borrowing) from its own account for position and risk, expecting to make a profit. A lender institution offering customers' securities on an undisclosed basis may also be considered to be acting as principal.
Principal Orders	:	Refers to the activity by a broker/dealer when buying or selling for its own account.
Proprietary Trading	:	Trading in securities or derivatives for the account of a firm itself, rather than on behalf of clients.

Quote	:	The highest bid to buy and the lowest offer to sell any stock at a given time.
Real-Time Trade Reporting	:	The act of reporting each trade immediately after completion of the transaction.
Round Lot Order	:	An order to buy or sell in multiples of 100 shares.
Scale Order	:	An order to buy or sell a security that specifies the total amount to be bought or sold at specified price variations.
Screen-Based Trading	:	Trading conducted through a network of electronic terminals.
Secondary Market	:	When stocks or bonds are traded or resold, they are said to be sold on the secondary market. The majority of all securities transactions takes place on the secondary market.
Securities and Exchange Commission (SEC)	:	The federal agency in the United States created by the Securities Exchange Act of 1934 to administer that act and the Securities Act of 1933. The statutes administered by the SEC are designed to promote full public disclosure and protect the investing public against fraudulent and manipulative practices in the securities markets.
Securities Investors Protection Corporation	:	A safeguard for investors capital created by the US Congress. It insures that cash and securities on deposit with a brokerage are insured up to $500,000 per customer in the event that the brokerage goes out of business.

Securities Lending : The temporary exchange of securities, generally for cash or other securities of at least an equivalent value, with an obligation to redeliver a like quantity of the same security on a future date.

Self-Regulation : The way n which the securities industry monitors itself to create a fair and orderly trading environment.

Settlement : The completion of a transaction, wherein the seller transfers securities or financial instruments to the buyer and the buyer transfers money to the seller. A settlement may be final or provisional.

Settlement Date : The date specified for delivery of securities between securities firms.

Short Sale (or Short Position) : A sale of securities which the seller does not own and thus must be covered by the time of delivery. This technique is used to take advantage of an anticipated decline in the price or to protect a profit in a long position.

Specialist : A member of a stock exchange who has two main functions. First, to maintain an orderly market in the securities assigned to them. To do this, the specialist must, to a reasonable degree, buy or sell for their own account when there is a temporary disparity between supply and demand. Second, the specialist acts as a broker's broker. At all times the specialists must put their customers' interests above their own.

Spread : The spread for a company's stock is influenced by a number of factors including the supply (or float), which is the total number of shares outstanding available to trade; demand or interest in a stock; and, total trading activity in the stock.

Stock Exchange	:	An organized marketplace for securities featured by the centralization of supply and demand for the transaction of orders by member brokers for institutional and individual investors.
Stock Index	:	A way of using a select group of stocks for long term evaluation. The performance of a group of stocks that experts regard as important is averaged, and over time that average serves as an indicator of the market's general movement.
Total Shares Outstanding	:	The number of shares of capital stock that have been issued and are in public hands.
Turnover Rate	:	The volume of shares traded in a year as a percentage of total shares listed on an exchange.
Underwriter	:	The investment banking firm that brought the company public.
Volatility	:	The degree of price fluctuation for a given asset, rate, or index; usually expressed as a variance or standard deviation.
Withholding Tax	:	A tax on income deducted at source, which a paying agent is legally obliged to deduct from its payments of interest on deposits, securities or similar financial instruments.
Yield	:	In general, a return on an investor's capital investment. For bonds, the coupon rate of interest divided by the purchase price, called current yield. Also, the rate of return on a bond, taking into account the total of annual interest payments, the purchase price, the redemption value, and the amount of time remaining until maturity.